SYLVANIA MAGNAVOX

# SERVICE MANUAL

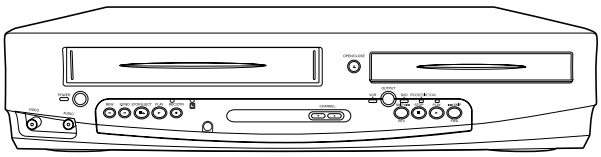
**Main Section**
- Specifications
- Preparation for Servicing
- Adjustment Procedures
- Schematic Diagrams
- CBA's
- Exploded Views
- Parts List

**When servicing the deck mechanism, refer to MK14 Deck Mechanism Section.**

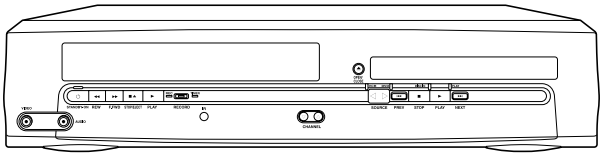
**Deck Mechanism Part No.: N2440FL, N2460FL**

## DVD PLAYER & VIDEO CASSETTE RECORDER

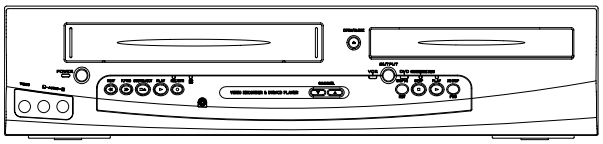
## DVC840F



## MWD2205



## DVC865F



VHS

# IMPORTANT SAFETY NOTICE

**Proper service and repair is important to the safe, reliable operation of all Funai Equipment. The service procedures recommended by Funai and described in this service manual are effective methods of performing service operations. Some of these service special tools should be used when and as recommended.**

**It is important to note that this service manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It also is important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. Funai could not possibly know, evaluate and advice the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, Funai has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by Funai must first use all precautions thoroughly so that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.**

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# MAIN SECTION

## DVD PLAYER & VIDEO CASSETTE RECORDER

# DVC840F/MWD2205/ DVC865F

**Main Section**
- **Specifications**
- **Preparation for Servicing**
- **Adjustment Procedures**
- **Schematic Diagrams**
- **CBA's**
- **Exploded Views**
- **Parts List**

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# SPECIFICATIONS

## < VCR Section >

| Description | Unit | Minimum | Nominal | Maximum | Remark |
|---|---|---|---|---|---|
| **1. Video** | | | | | |
| 1-1. Video Output (PB) | Vp-p | 0.8 | 1.0 | 1.2 | SP Mode |
| 1-2. Video Output (R/P) | Vp-p | 0.8 | 1.0 | 1.2 | |
| 1-3. Video S/N Y (R/P) | dB | 40 | 45 | | SP Mode, W/O Burst |
| 1-4. Video Color S/N AM (R/P) | dB | 35 | 41 | | SP Mode |
| 1-5. Video Color S/N PM (R/P) | dB | 33 | 36 | | SP Mode |
| 1-6. Resolution (PB) | Line | 230 | 245 | | SP Mode |
| **2. Servo** | | | | | |
| 2-1. Jitter Low | μsec | | 0.07 | 0.12 | SP Mode |
| 2-2. Wow & Flutter | % | | 0.3 | 0.5 | SP Mode |
| **3. Normal Audio** | | | | | |
| 3-1. Output (PB) | dBV | -9 | -6 | -3 | SP Mode |
| 3-2. Output (R/P) | dBV | -9 | -6 | -1.5 | SP Mode |
| 3-3. S/N (R/P) | dB | 36 | 41 | | SP Mode |
| 3-4. Distortion (R/P) | % | | 1.0 | 4.0 | SP Mode |
| 3-5. Freq. resp (R/P) at 200 Hz | dB | -11 | -4 | | SP Mode |
| (-20 dB ref. 1 kHz) at 8 kHz | dB | -14 | -4 | | SP Mode |
| **4. Tuner** | | | | | |
| 4-1. Video output | Vp-p | 0.8 | 1.0 | 1.2 | E-E Mode |
| 4-2. Video S/N | dB | 39 | 42 | | E-E Mode |
| 4-3. Audio output | dB | -10 | -6 | -2 | E-E Mode |
| 4-4. Audio S/N | dB | 40 | 46 | | E-E Mode |
| **5. Hi-Fi Audio [ DVC865F ]** | | | | | |
| 5-1. Output | dBV | -12 | -8 | -4 | SP Mode |
| 5-2. Dynamic Range | dB | 70 | 80 | | SP Mode |
| 5-3. Freq. resp (6 dB B.W) | Hz | | 20 ~ 20 k | | SP Mode |

**Note:** Nominal specs represent the design specs. All units should be able to approximate these – some will exceed and some may drop slightly below these specs. Limit specs represent the absolute worst condition that still might be considered acceptable; In no case should a unit fail to meet limit specs.

## < DVD Section >

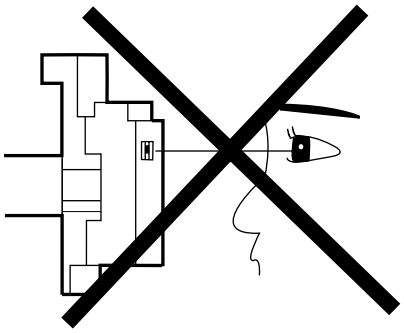
| Item | Conditions | Unit | Nominal | Limit |
|---|---|---|---|---|
| 1. Video Output | 75 Ω load | Vpp | 1.0 | ± 0.1 |
| 2. Coaxial Digital Out | 75 Ω load | mVpp | 500 | ± 50 |
| 3. Audio (PCM) | | | | |
| 3-1. Output Level | 1 kHz, 0 dB | Vrms | 2.0 | |
| 3-2. S/N | | dB | 100 | |
| 3-3. Freq. Response | | | | |
| DVD | fs = 48 kHz ± 0.5 dB | Hz | 20 ~ 22 k | |
| CD | fs = 44.1 kHz ± 0.5 dB | Hz | 20 ~ 20 k | |
| 3-4. THD+N | | | | |
| DVD | 1 kHz, 0 dB | % | 0.01 | |
| CD | 1 kHz, 0 dB | % | 0.01 | |

**Notes:**

1. All Items are measured without pre-emphasis unless otherwise specified.
2. Power supply: AC 120 V, 60 Hz
3. Load imp.: 100 kΩ
4. Ambient Temperature: +25 °C

# LASER BEAM SAFETY PRECAUTIONS

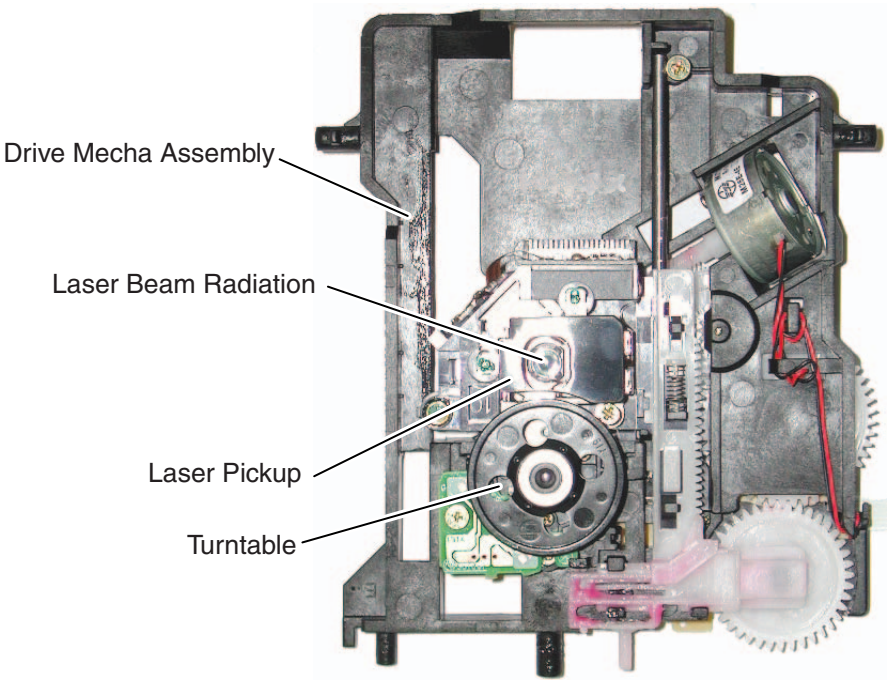
This DVD player uses a pickup that emits a laser beam.



**Do not look directly at the laser beam coming from the pickup or allow it to strike against your skin.**

The laser beam is emitted from the location shown in the figure. When checking the laser diode, be sure to keep your eyes at least 30 cm away from the pickup lens when the diode is turned on. Do not look directly at the laser beam.

**CAUTION:** Use of controls and adjustments, or doing procedures other than those specified herein, may result in hazardous radiation exposure.




CAUTION
LASER RADIATION
WHEN OPEN. DO NOT
STARE INTO BEAM.

**Location: Top of DVD mechanism.**

# IMPORTANT SAFETY PRECAUTIONS

## Product Safety Notice

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by a ⚠ on schematics and in parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. The Product's Safety is under review continuously and new instructions are issued whenever appropriate. Prior to shipment from the factory, our products are carefully inspected to confirm with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

## Precautions during Servicing

**A.** Parts identified by the ⚠ symbol are critical for safety. Replace only with part number specified.

**B.** In addition to safety, other parts and assemblies are specified for conformance with regulations applying to spurious radiation. These must also be replaced only with specified replacements. Examples: RF converters, RF cables, noise blocking capacitors, and noise blocking filters, etc.

**C.** Use specified internal wiring. Note especially:
1) Wires covered with PVC tubing
2) Double insulated wires
3) High voltage leads

**D.** Use specified insulating materials for hazardous live parts. Note especially:
1) Insulation tape
2) PVC tubing
3) Spacers
4) Insulators for transistors

**E.** When replacing AC primary side components (transformers, power cord, etc.), wrap ends of wires securely about the terminals before soldering.

**F.** Observe that the wires do not contact heat producing parts (heat sinks, oxide metal film resistors, fusible resistors, etc.).

**G.** Check that replaced wires do not contact sharp edges or pointed parts.

**H.** When a power cord has been replaced, check that 5 - 6 kg of force in any direction will not loosen it.

**I.** Also check areas surrounding repaired locations.

**J.** Be careful that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

**K.** Crimp type wire connector
The power transformer uses crimp type connectors which connect the power cord and the primary side of the transformer. When replacing the transformer, follow these steps carefully and precisely to prevent shock hazards.
Replacement procedure
1) Remove the old connector by cutting the wires at a point close to the connector.
**Important:** Do not re-use a connector. (Discard it.)
2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.
3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.
4) Use a crimping tool to crimp the metal sleeve at its center. Be sure to crimp fully to the complete closure of the tool.

**L.** When connecting or disconnecting the internal connectors, first, disconnect the AC plug from the AC outlet.

# Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts, and wires have been returned to their original positions. Afterwards, do the following tests and confirm the specified values to verify compliance with safety standards.

## 1. Clearance Distance

When replacing primary circuit components, confirm specified clearance distance (d) and (d') between soldered terminals, and between terminals and surrounding metallic parts. (See Fig. 1)

**Table 1: Ratings for selected area**

| AC Line Voltage | Clearance Distance (d), (d') |
|---|---|
| 120 V | ≥ 3.2 mm (0.126 inches) |

**Note:** This table is unofficial and for reference only. Be sure to confirm the precise values.

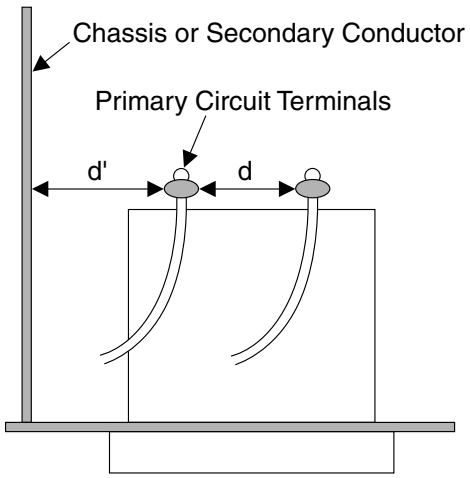



**Fig. 1**

## 2. Leakage Current Test

Confirm the specified (or lower) leakage current between B (earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.) is lower than or equal to the specified value in the table below.

**Measuring Method (Power ON):**

Insert load Z between B (earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across the terminals of load Z. See Fig. 2 and the following table.

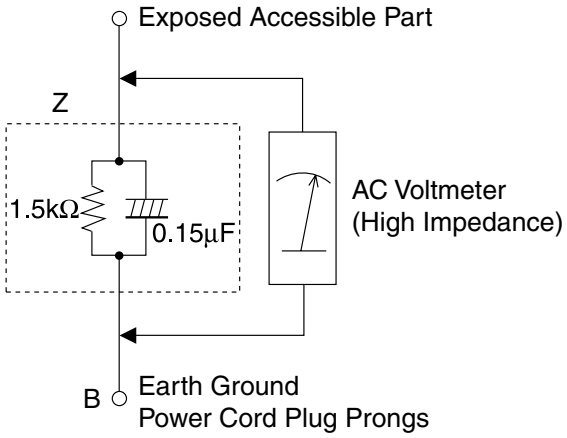



**Fig. 2**

**Table 2: Leakage current ratings for selected areas**

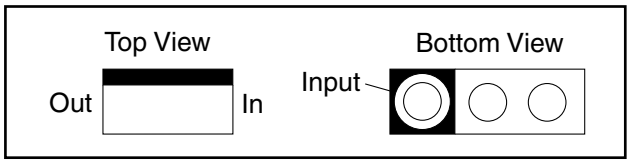
| AC Line Voltage | Load Z | Leakage Current (i) | Earth Ground (B) to: |
|---|---|---|---|
| 120 V | 0.15 μF CAP. & 1.5 kΩ RES. Connected in parallel | i ≤ 0.5 mA Peak | Exposed accessible parts |

**Note:** This table is unofficial and for reference only. Be sure to confirm the precise values.

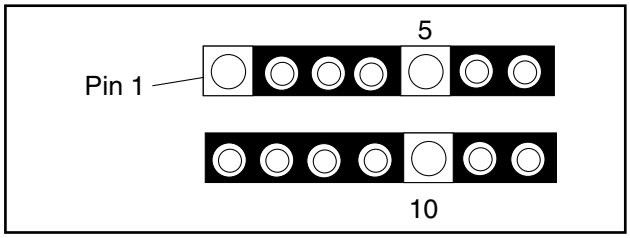
# STANDARD NOTES FOR SERVICING

## Circuit Board Indications

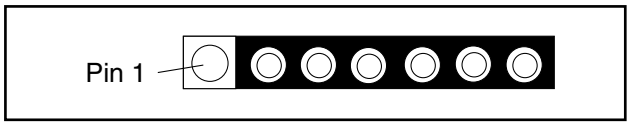
1. The output pin of the 3 pin Regulator ICs is indicated as shown.




2. For other ICs, pin 1 and every fifth pin are indicated as shown.

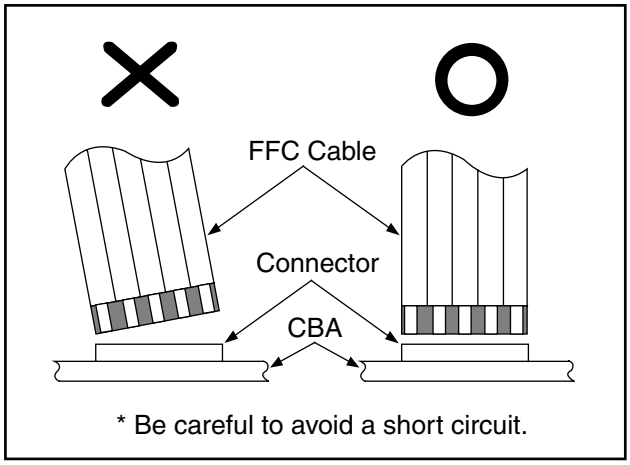



3. The 1st pin of every male connector is indicated as shown.




## Instructions for Connectors

1. When you connect or disconnect the FFC (Flexible Foil Connector) cable, be sure to first disconnect the AC cord.
2. FFC (Flexible Foil Connector) cable should be inserted parallel into the connector, not at an angle.




## Pb (Lead) Free Solder

**When soldering, be sure to use the Pb free solder.**

## How to Remove / Install Flat Pack-IC

### 1. Removal

**With Hot-Air Flat Pack-IC Desoldering Machine:**

1. Prepare the hot-air flat pack-IC desoldering machine, then apply hot air to the Flat Pack-IC (about 5 to 6 seconds). (Fig. S-1-1)

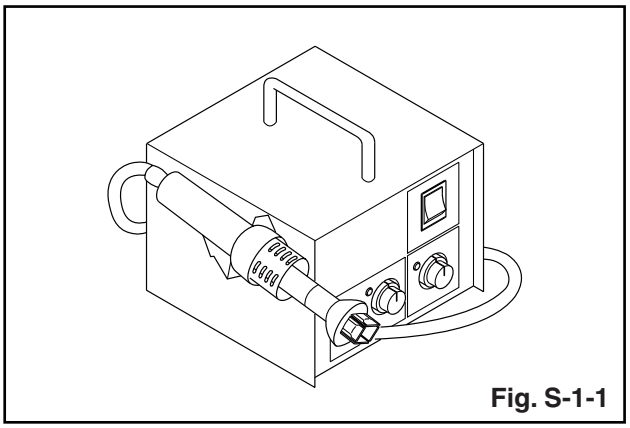


**Fig. S-1-1**

2. Remove the flat pack-IC with tweezers while applying the hot air.
3. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
4. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

**CAUTION:**

1. The Flat Pack-IC shape may differ by models. Use an appropriate hot-air flat pack-IC desoldering machine, whose shape matches that of the Flat Pack-IC.
2. Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape around the flat pack-IC to protect other parts from damage. (Fig. S-1-2)

3. The flat pack-IC on the CBA is affixed with glue, so be careful not to break or damage the foil of each pin or the solder lands under the IC when removing it.

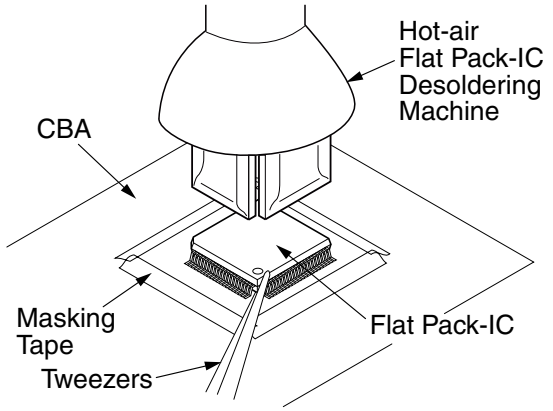



**Fig. S-1-2**

**With Soldering Iron:**

1. Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)

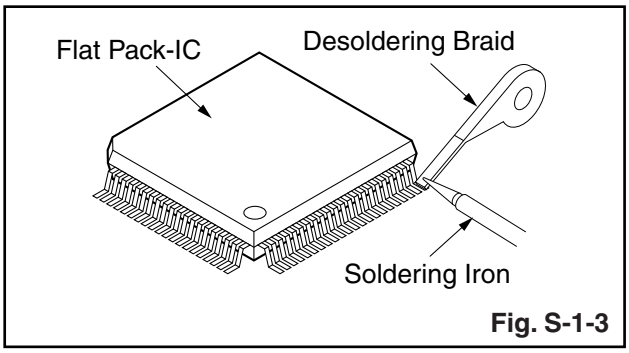



**Fig. S-1-3**

2. Lift each lead of the flat pack-IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air desoldering machine. (Fig. S-1-4)

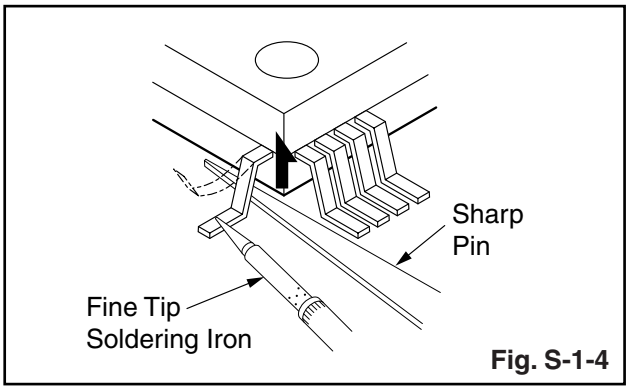



**Fig. S-1-4**

3. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
4. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

**With Iron Wire:**

1. Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)
2. Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.
3. While heating the pins using a fine tip soldering iron or hot air blower, pull up the wire as the solder melts so as to lift the IC leads from the CBA contact pads as shown in Fig. S-1-5.
4. Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
5. Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

**Note:** When using a soldering iron, care must be taken to ensure that the flat pack-IC is not being held by glue. When the flat pack-IC is removed from the CBA, handle it gently because it may be damaged if force is applied.

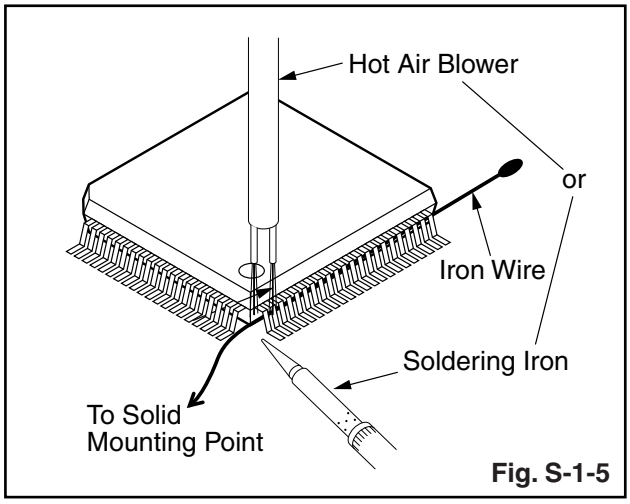



**Fig. S-1-5**

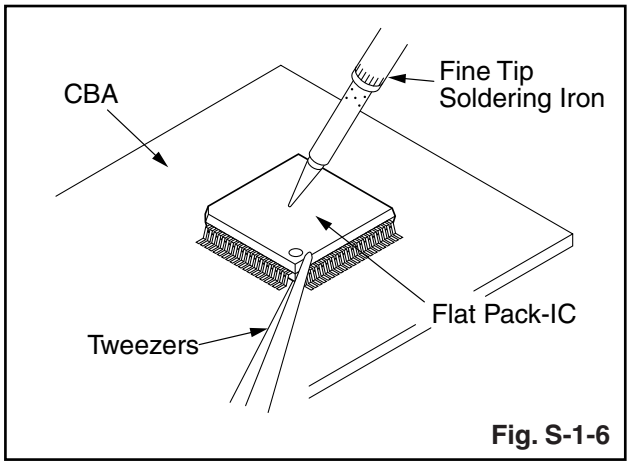



**Fig. S-1-6**

## 2. Installation

1. Using desoldering braid, remove the solder from the foil of each pin of the flat pack-IC on the CBA so you can install a replacement flat pack-IC more easily.
2. The "●" mark on the flat pack-IC indicates pin 1. (See Fig. S-1-7.) Be sure this mark matches the 1 on the PCB when positioning for installation. Then presolder the four corners of the flat pack-IC. (See Fig. S-1-8.)
3. Solder all pins of the flat pack-IC. Be sure that none of the pins have solder bridges.

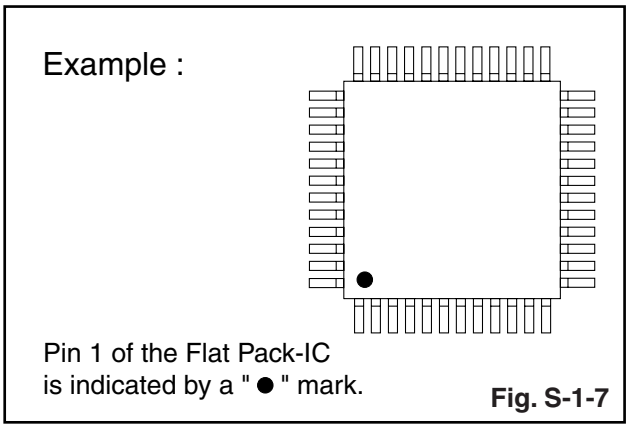



**Fig. S-1-7**

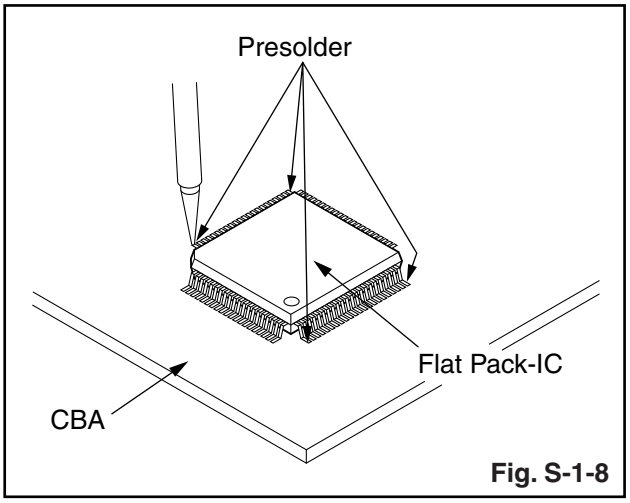



**Fig. S-1-8**

# Instructions for Handling Semi-conductors

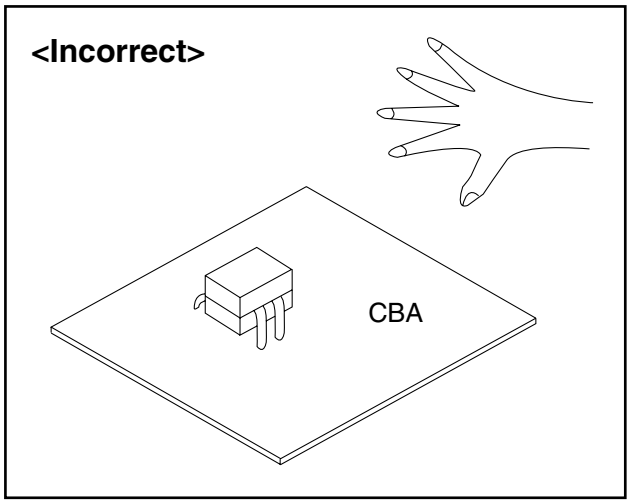
Electrostatic breakdown of the semi-conductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

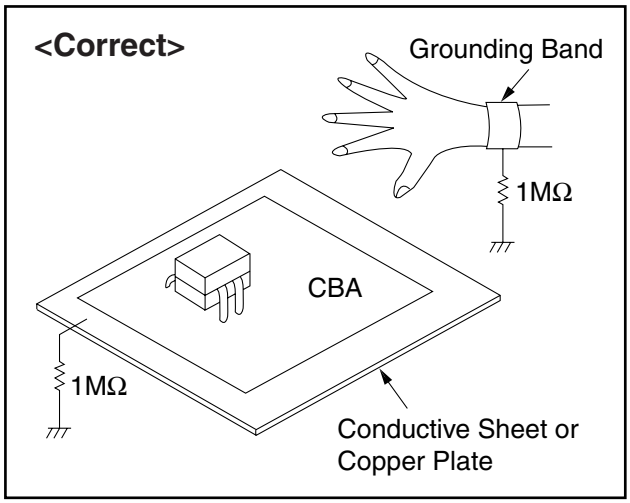
## 1. Ground for Human Body

Be sure to wear a grounding band (1 MΩ) that is properly grounded to remove any static electricity that may be charged on the body.

## 2. Ground for Workbench

Be sure to place a conductive sheet or copper plate with proper grounding (1 MΩ) on the workbench or other surface, where the semi-conductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting semi-conductors with your clothing.



# PREPARATION FOR SERVICING

## How to Enter the Service Mode

About Optical Sensors

**Caution:**

An optical sensor system is used for the Tape Start and End Sensors on this equipment. Carefully read and follow the instructions below. Otherwise the unit may operate erratically.

**What to do for preparation**

Insert a tape into the Deck Mechanism Assembly and press the [PLAY] button. The tape will be loaded into the Deck Mechanism Assembly. Make sure the power is on, connect TP502 (S-INH) to GND. This will stop the function of Tape Start Sensor, Tape End Sensor and Reel Sensors. (If these TPs are connected before plugging in the unit, the function of the sensors will stay valid.) See Fig. 1.

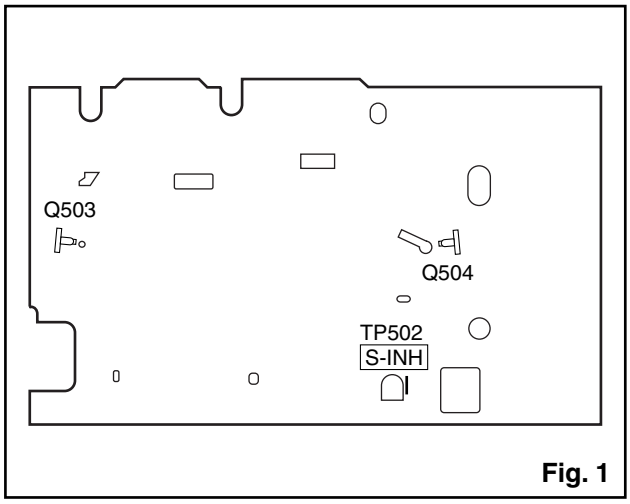


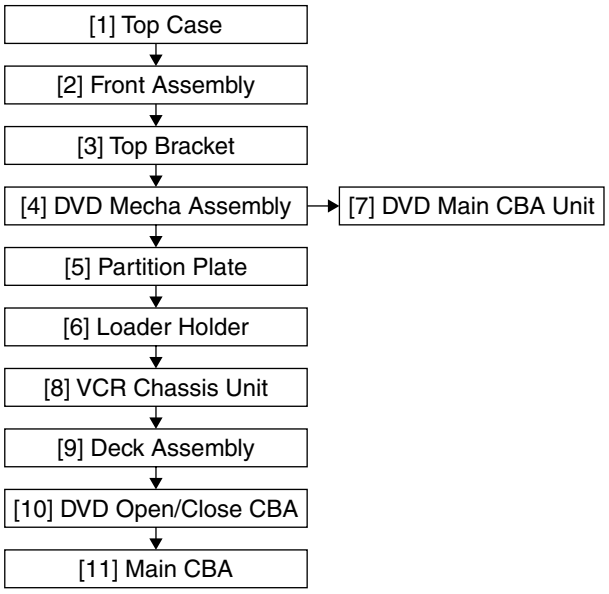

**Fig. 1**

**Note:** Because the Tape End Sensors are inactive, do not run a tape all the way to the start or the end of the tape to avoid tape damage.

# CABINET DISASSEMBLY INSTRUCTIONS

## 1. Disassembly Flowchart

This flowchart indicates the disassembly steps to gain access to item(s) to be serviced. When reassembling, follow the steps in reverse order. Bend, route, and dress the cables as they were originally.




## 2. Disassembly Method

| ID/ Loc. No. | Part | Removal | | |
|---|---|---|---|---|
| | | Fig. No. | Remove/*Unhook/ Unlock/Release/ Unplug/Desolder | Note |
| [1] | Top Case | D1 | 4(S-1) | --- |
| [2] | Front Assembly | D2 | *3(L-1), *3(L-2) | 1 |
| [3] | Top Bracket | D2 | 3(S-2) | --- |
| [4] | DVD Mecha Assembly | D3 | 4(S-3), *CN401, *CN601 | --- |
| [5] | Partition Plate | D3 | 2(S-4) | --- |
| [6] | Loader Holder | D3 | 2(S-5) | --- |
| [7] | DVD Main CBA Unit | D4 | (S-6), *CN201, *CN301 | 2, 3 |
| [8] | VCR Chassis Unit | D5 | 5(S-7), (S-8) | - |
| [9] | Deck Assembly | D6 | Desolder, (S-9), (S-10), (S-11) | 4, 5 |
| [10] | DVD Open/ Close CBA | D6 | Desolder | --- |
| [11] | Main CBA | D6 | ---------- | --- |
| | | ↓ (3) | ↓ (4) | ↓ (5) |

**Note:**

(1) Identification (location) No. of parts in the figures

(2) Name of the part

(3) Figure Number for reference

(4) Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
P = Spring, L = Locking Tab, S = Screw,
CN = Connector
* = Unhook, Unlock, Release, Unplug, or Desolder
e.g. 2(S-2) = two Screws (S-2),
2(L-2) = two Locking Tabs (L-2)

(5) Refer to “Reference Notes.”

### Reference Notes

1. **CAUTION 1:** Locking Tabs (L-1) and (L-2) are fragile. Be careful not to break them.
   1) Release three Locking Tabs (L-1).
   2) Release three Locking Tabs (L-2), then remove the Front Assembly.
2. **CAUTION 2:** Electrostatic breakdown of the laser diode in the optical system block may occur as a potential difference caused by electrostatic charge accumulated on cloth, human body etc, during unpacking or repair work.
   To avoid damage of pickup follow next procedures.
   1) Disconnect Connector (CN301). Remove a Screw (S-6) and lift the DVD Main CBA Unit. (Fig. D4)
   2) Short the three short lands of FPC cable with solder before removing the FFC cable (CN201) from it. If you disconnect the FFC cable (CN201), the laser diode of pickup will be destroyed. (Fig. D4)
3. **CAUTION 3:** When reassembling, confirm the FFC cable (CN201) is connected completely. Then remove the solder from the three short lands of FPC cable. (Fig. D4)
4. When reassembling, solder wire jumpers as shown in Fig. D6.

5. Before installing the Deck Assembly, be sure to place the pin of LD-SW on Main CBA as shown in Fig. D6. Then, install the Deck Assembly while aligning the hole of Cam Gear with the pin of LD-SW, the shaft of Cam Gear with the hole of LD-SW as shown in Fig. D6.

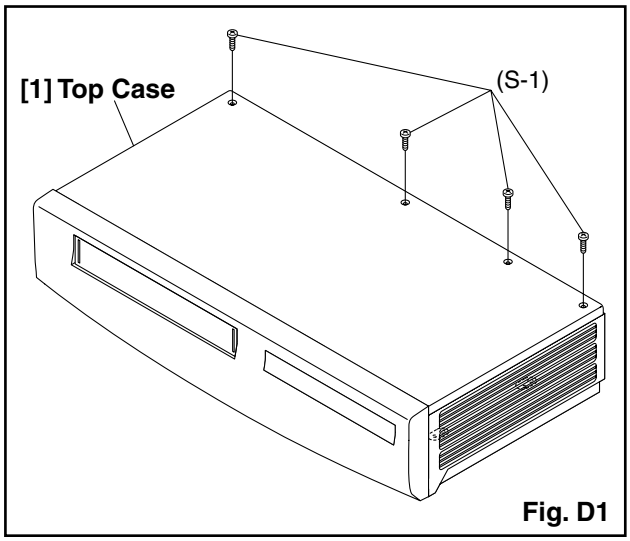


Fig. D1

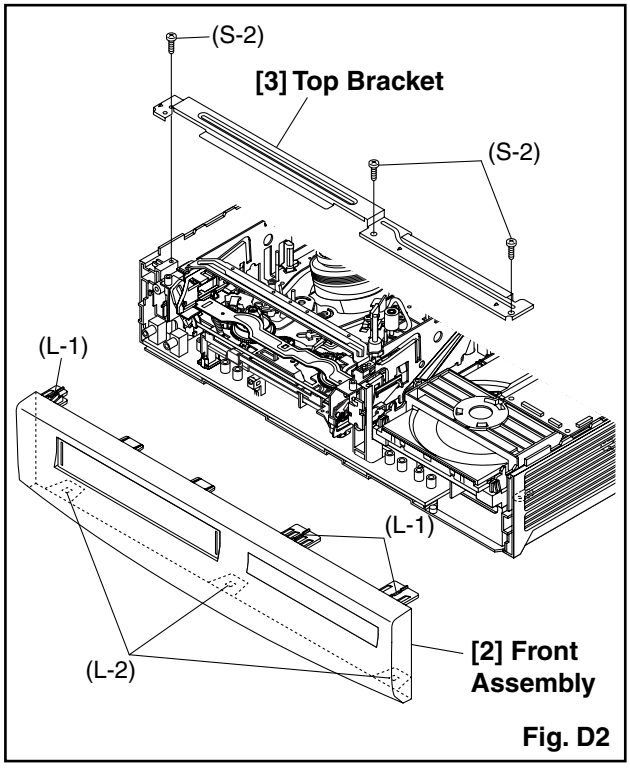


Fig. D2

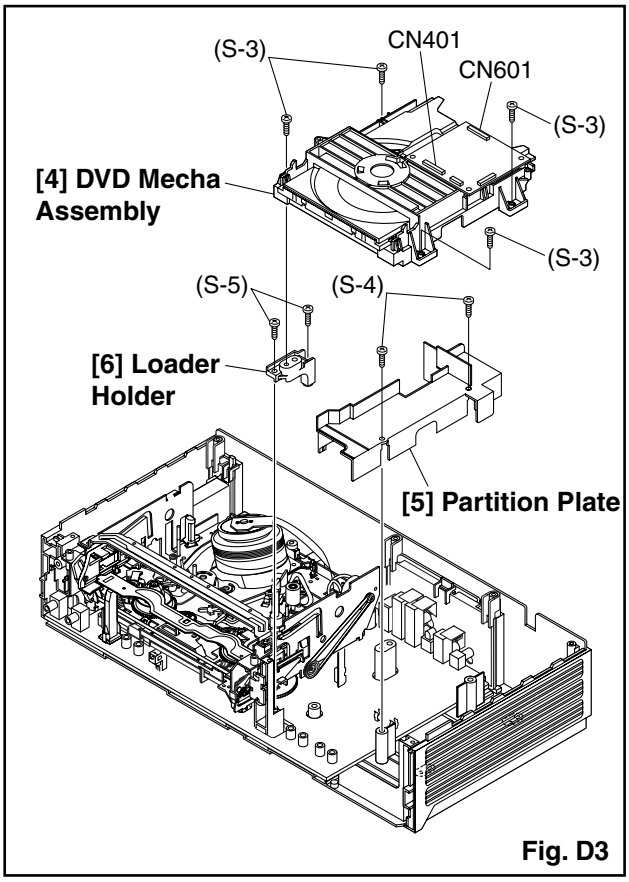


Fig. D3

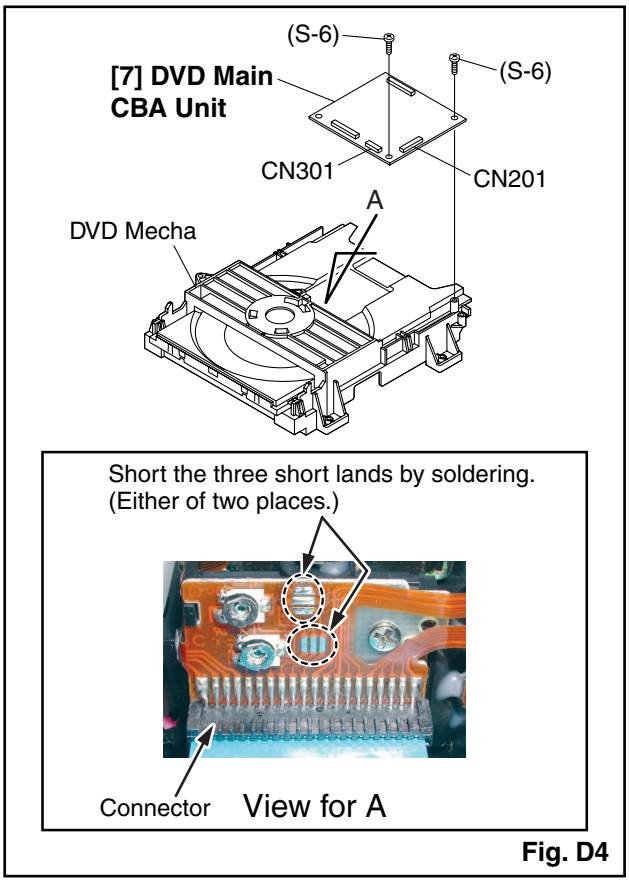


Fig. D4

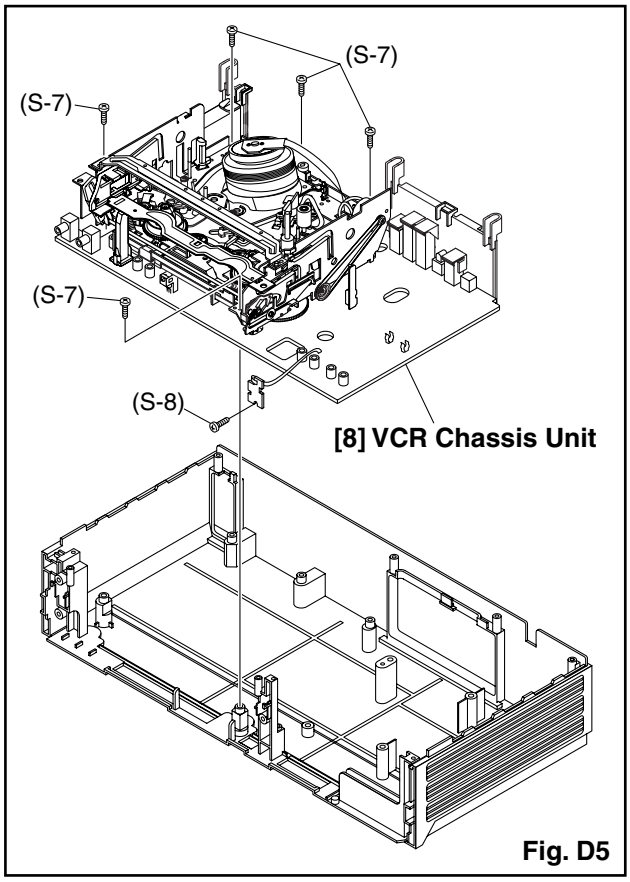
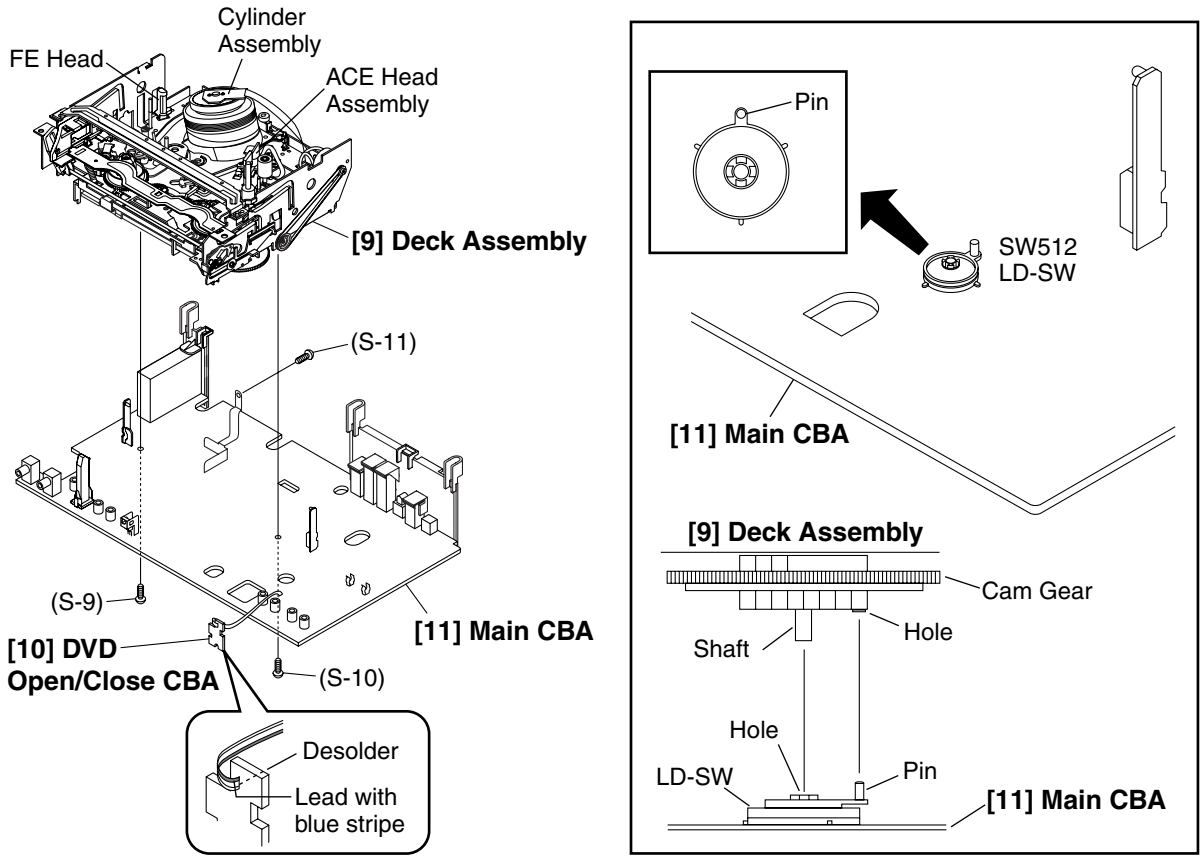
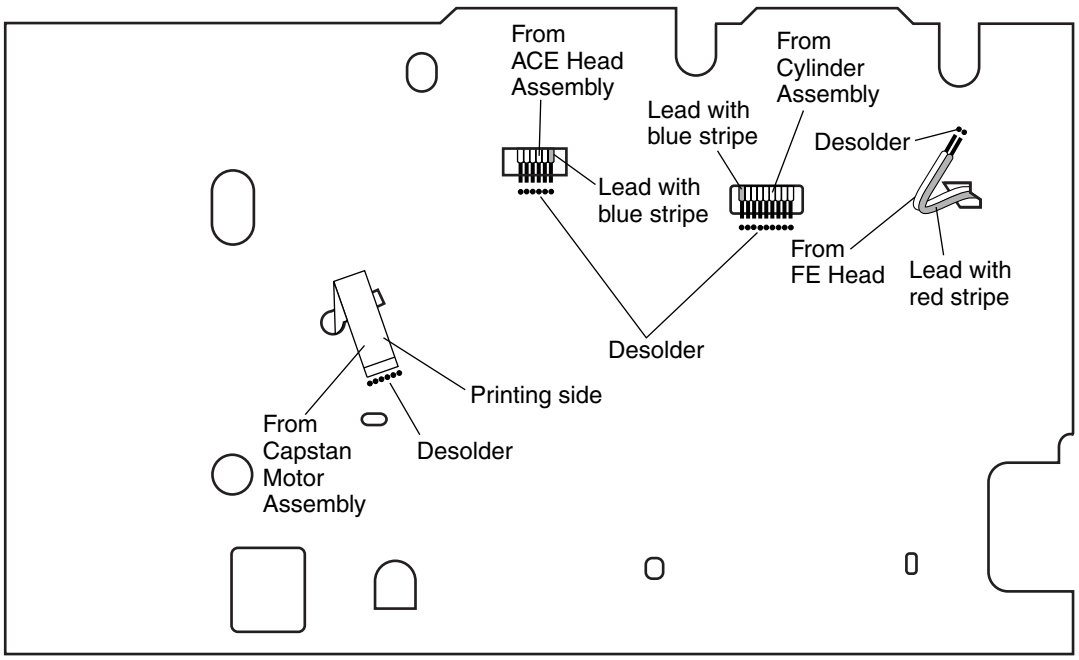



**Fig. D5**



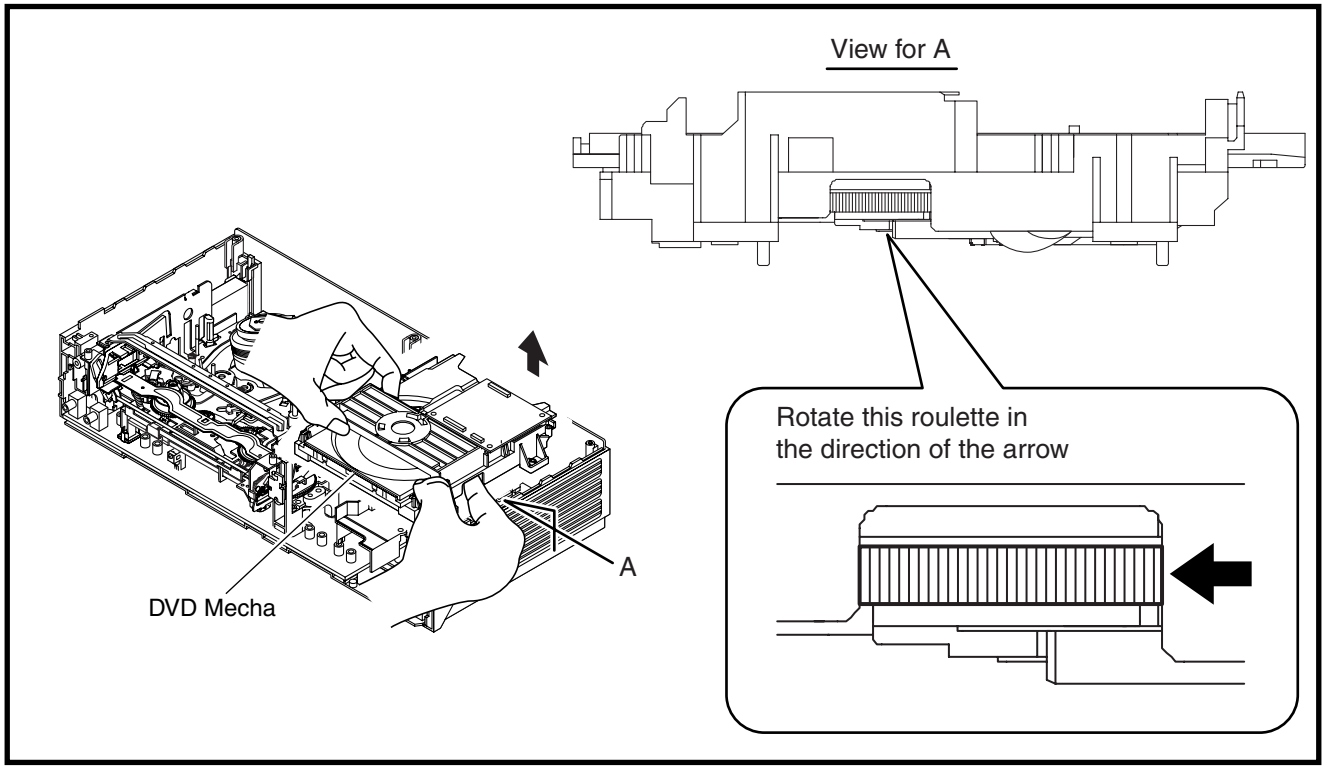

**BOTTOM VIEW**

Lead connections of Deck Assembly and Main CBA

**Fig. D6**

## 3. HOW TO EJECT MANUALLY

1. Remove the Top Case, Front Assembly and Top Bracket.
2. Remove four Screws (S-3) in Fig. D3. Do not disconnect connectors.
3. While lifting up the DVD Mecha, rotate the roulette in the direction of the arrow as shown below.
4. Pull the tray slowly with a hand.



# ELECTRICAL ADJUSTMENT INSTRUCTIONS

### General Note: "CBA" is abbreviation for "Circuit Board Assembly."

**NOTE:**

1. Electrical adjustments are required after replacing circuit components and certain mechanical parts. It is important to do these adjustments only after all repairs and replacements have been completed. Also, do not attempt these adjustments unless the proper equipment is available.
2. To perform these alignment / confirmation procedures, make sure that the tracking control is set in the center position: Press either [CHANNEL ▼] or [CHANNEL ▲] button on the front panel first, then the [PLAY] button on the front panel.

## Test Equipment Required

1. Oscilloscope: Dual-trace with 10:1 probe,
   V-Range: 0.001~50 V/Div.,
   F-Range: DC~AC-20 MHz
2. Alignment Tape (FL8A)

## Head Switching Position Adjustment

**Purpose:** To determine the Head Switching position during playback.

**Symptom of Misadjustment:** May cause Head Switching noise or vertical jitter in the picture.

| Test point | Adj. Point | Mode | Input |
|---|---|---|---|
| TP751(V-OUT)<br>TP302(RF-SW)<br>GND | VR501<br>(Switching Point) | PLAY<br>(SP) | ----- |
| **Tape** | **Measurement Equipment** | **Spec.** | |
| FL8A | Oscilloscope | 6.5H ± 1H<br>(412.7µs±63.5µs) | |

**Connections of Measurement Equipment**

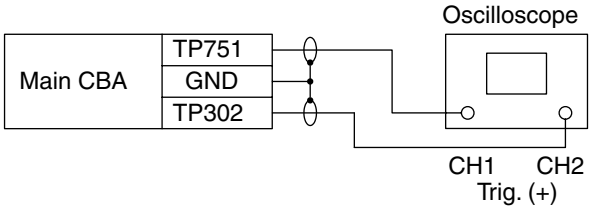
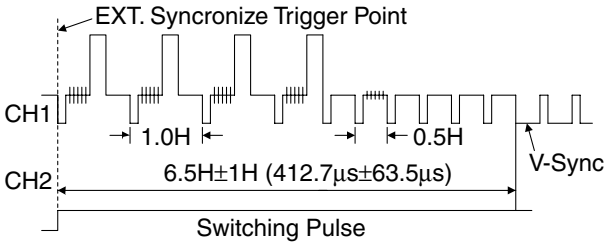



**Figure 1**




**Note:** TP751(V-OUT), TP302(RF-SW), VR501(Switching Point) --- Main CBA

**Reference Notes:**

Playback the Alignment tape and adjust VR501 so that the V-sync front edge of the CH1 video output waveform is at the 6.5H ± 1H (412.7 µs ± 63.5 µs) delayed position from the rising edge of the CH2 head switching pulse waveform.

# HOW TO INITIALIZE THE DVD PLAYER & VCR

To put the program back at the factory-default, initialize the DVD player & VCR as the following procedure.

## < DVD Section >

1. Press [DVD], [1], [2], [3], [4], and [DISPLAY] buttons on the remote control unit in that order.
   Fig. a appears on the screen.

"*******" differ depending on the models.

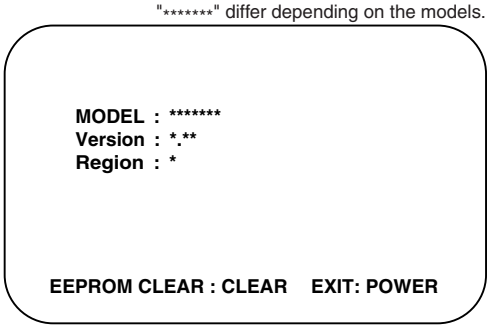



Fig. a

2. Press [CLEAR/C.RESET] button on the remote control unit.
   Fig. b appears on the screen.

"*******" differ depending on the models.

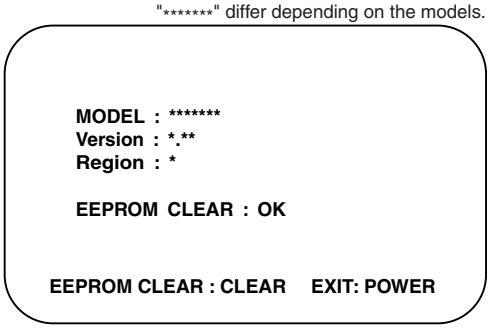



Fig. b

   When “OK” appears on the screen, the factory default will be set. Then the firmware renewal mode is complete.

3. To exit this mode, press [POWER] or [STANDBY-ON] button.

# FIRMWARE RENEWAL MODE

1. Turn the power on and remove the disc on the tray.
2. To put the DVD player into version up mode, press [DVD], [9], [8], [7], [6], and [SEARCH MODE] buttons on the remote control unit in that order.
   The tray will open automatically.
   Fig. a appears on the screen.

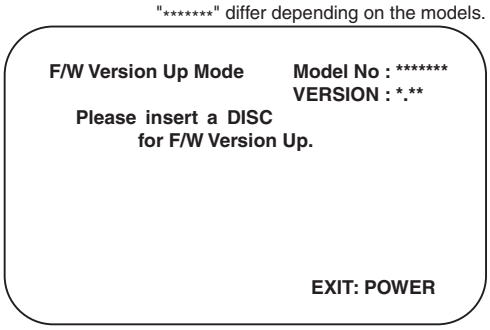



Fig. a Version Up Mode Screen

   The DVD player can also enter the version up mode with the tray open. In this case, Fig. a will be shown on the screen while the tray is open.

3. Load the disc for version up.
4. The DVD player enters the F/W version up mode automatically. Fig. c appears on the screen. If you enter the F/W for different models, “Disc Error” will appear on the screen, then the tray will open automatically.

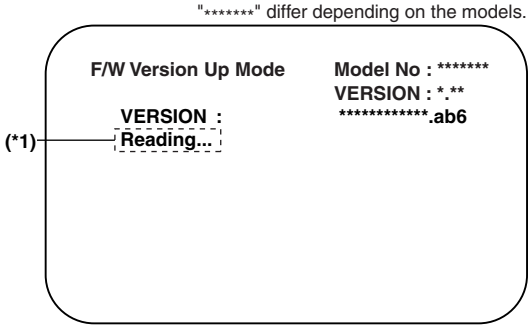



Fig. c Programming Mode Screen

   The appearance shown in (*1) of Fig. c is described as follows:

| No. | Appearance | State |
|---|---|---|
| 1 | Reading... | Sending files into the memory |
| 2 | Erasing... | Erasing previous version data |
| 3 | Programming... | Writing new version data |

5. After programming is finished, the tray opens automatically. Fig. e appears on the screen and the checksum in (*2) of Fig. e.

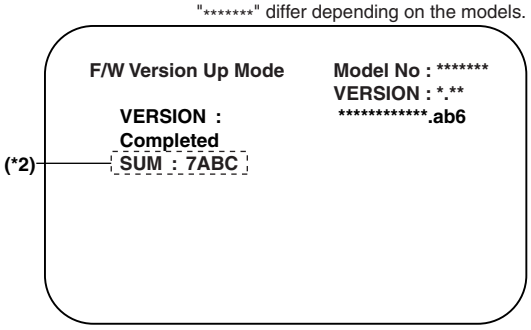



Fig. e Completed Program Mode Screen

   At this time, no buttons are available.

6. Remove the disc on the tray.
7. Unplug the AC cord from the AC outlet. Then plug it again.
8. Turn the power on by pressing the [POWER] or [STANDBY-ON] button and the tray will close.
9. Press [1], [2], [3], [4], and [DISPLAY] buttons on the remote control unit in that order.
   Fig. g appears on the screen.

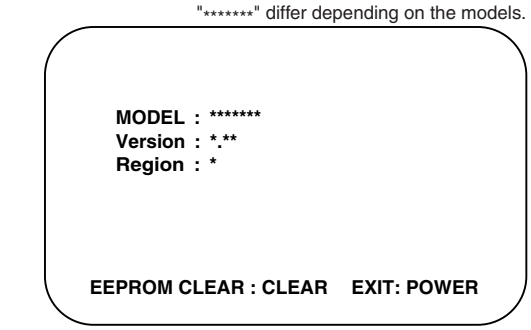



Fig. g

10. Press [CLEAR/C.RESET] button on the remote control unit.
    Fig. h appears on the screen.

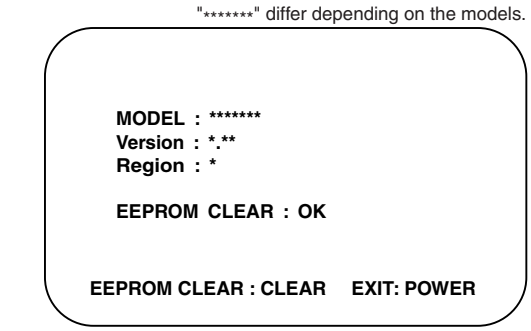



Fig. h

    When “OK” appears on the screen, the factory default will be set. Then the firmware renewal mode is complete.

11. To exit this mode, press [POWER] or [STANDBY-ON] button.

# FUNCTION INDICATOR SYMBOLS

**Note:** If a mechanical malfunction occurs, the power is turned off. When the power comes on again after that by pressing [POWER] or [STANDBY-ON] button, an error message is displayed on the TV screen for 5 seconds.

| Cause | Indicator Active |
|---|---|
| When reel or capstan mechanism is not functioning correctly | "EJECT ⏏ R" is displayed on a TV screen. (Refer to Fig. 1.) |
| When tape loading mechanism is not functioning correctly | "EJECT ⏏ T" is displayed on a TV screen. (Refer to Fig. 2.) |
| When cassette loading mechanism is not functioning correctly | "EJECT ⏏ C" is displayed on a TV screen. (Refer to Fig. 3.) |
| When the drum is not working properly | "EJECT ⏏ D" is displayed on a TV screen. (Refer to Fig. 4.) |

## TV screen

When reel or capstan mechanism is not functioning correctly

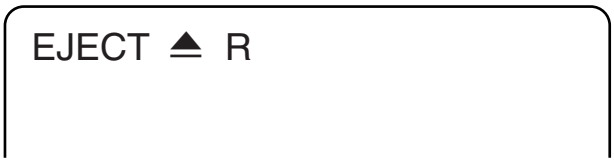



**Fig. 1**

When tape loading mechanism is not functioning correctly

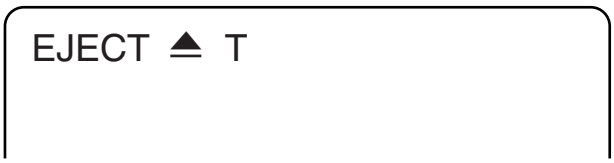



**Fig. 2**

When cassette loading mechanism is not functioning correctly

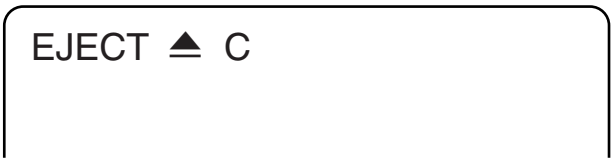



**Fig. 3**

When the drum is not working properly

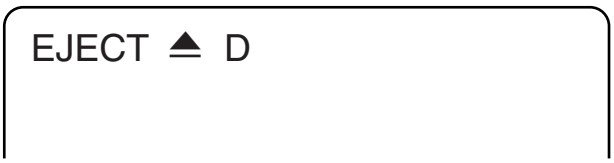
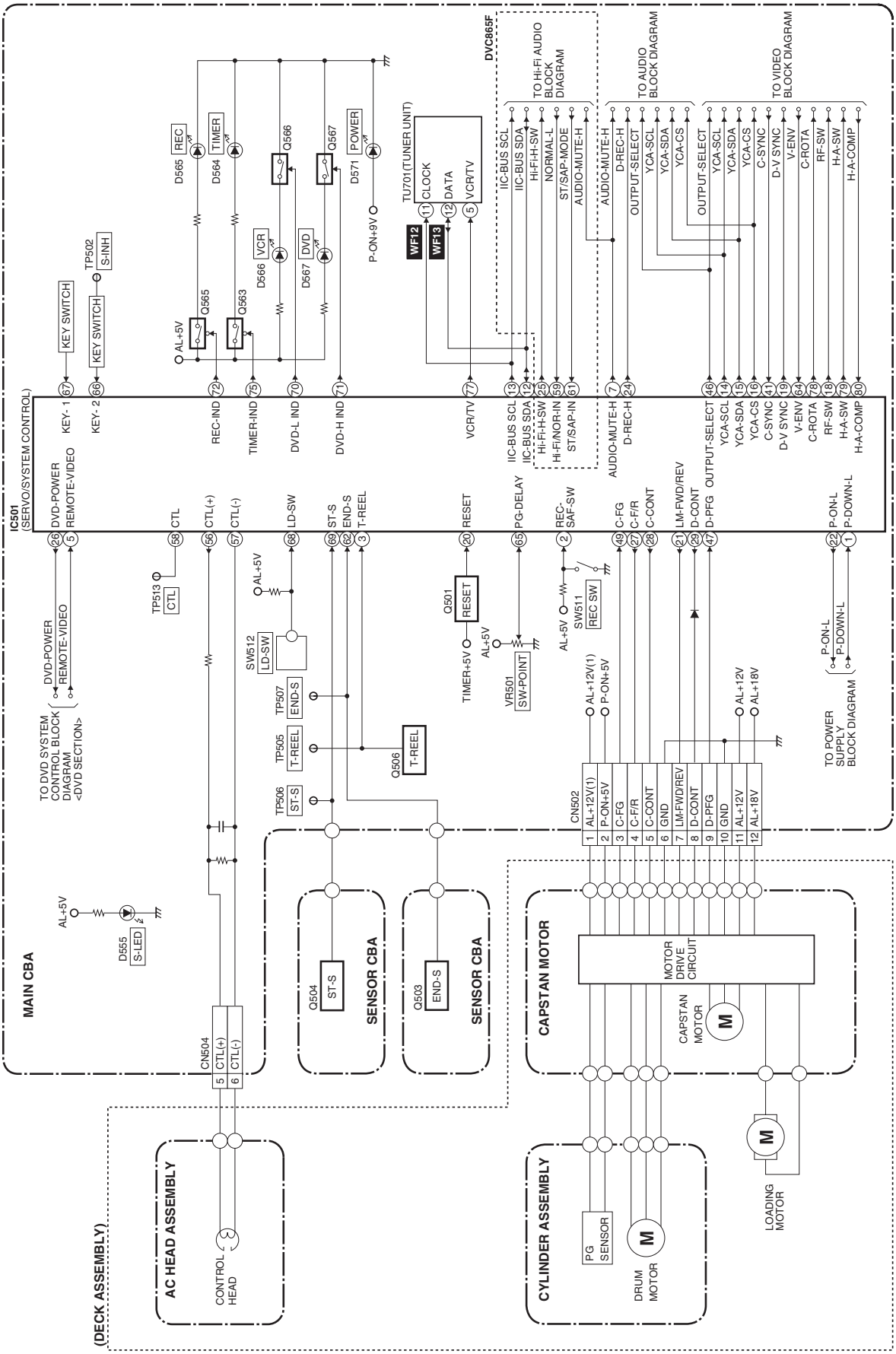


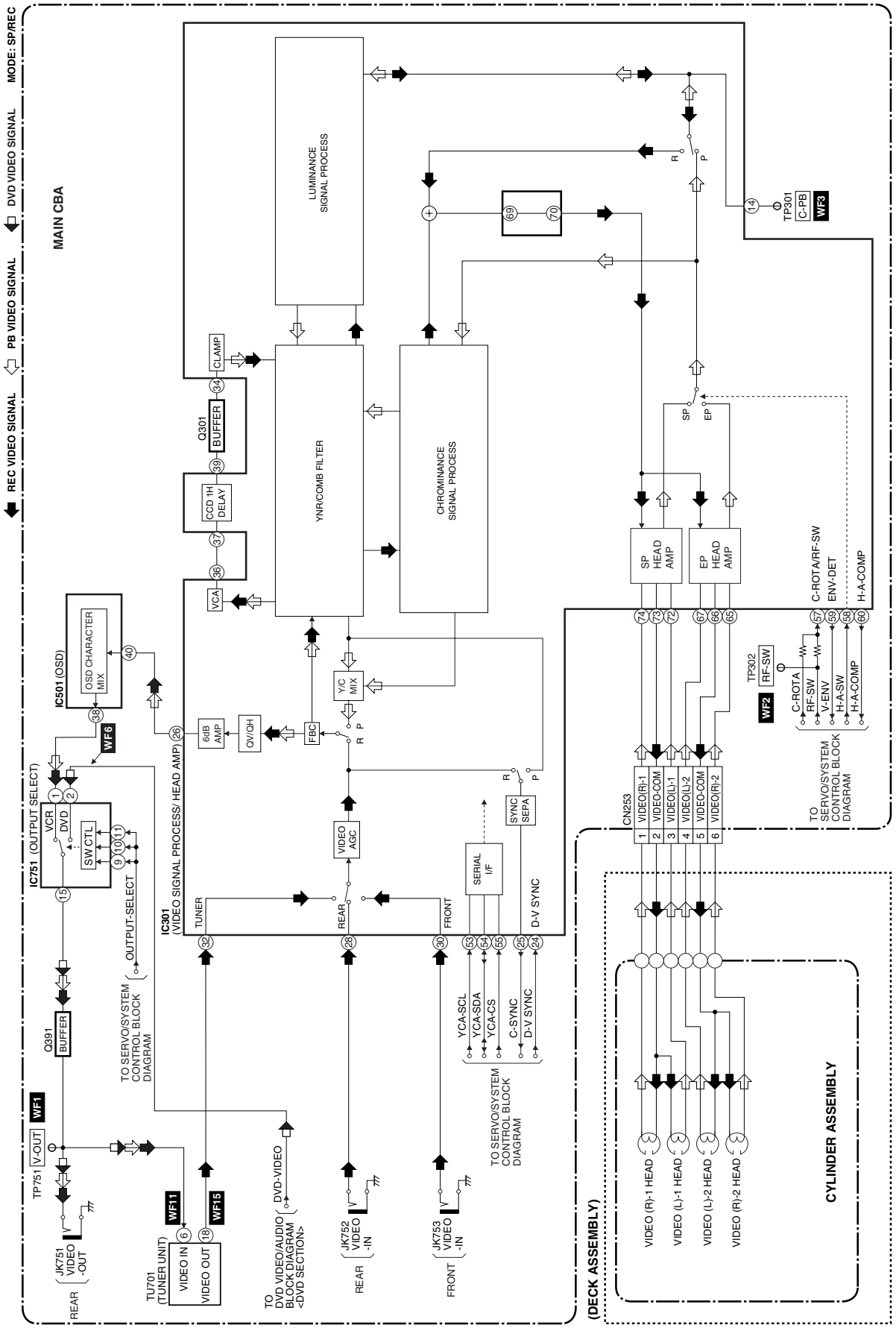

**Fig. 4**

# BLOCK DIAGRAMS <VCR SECTION>

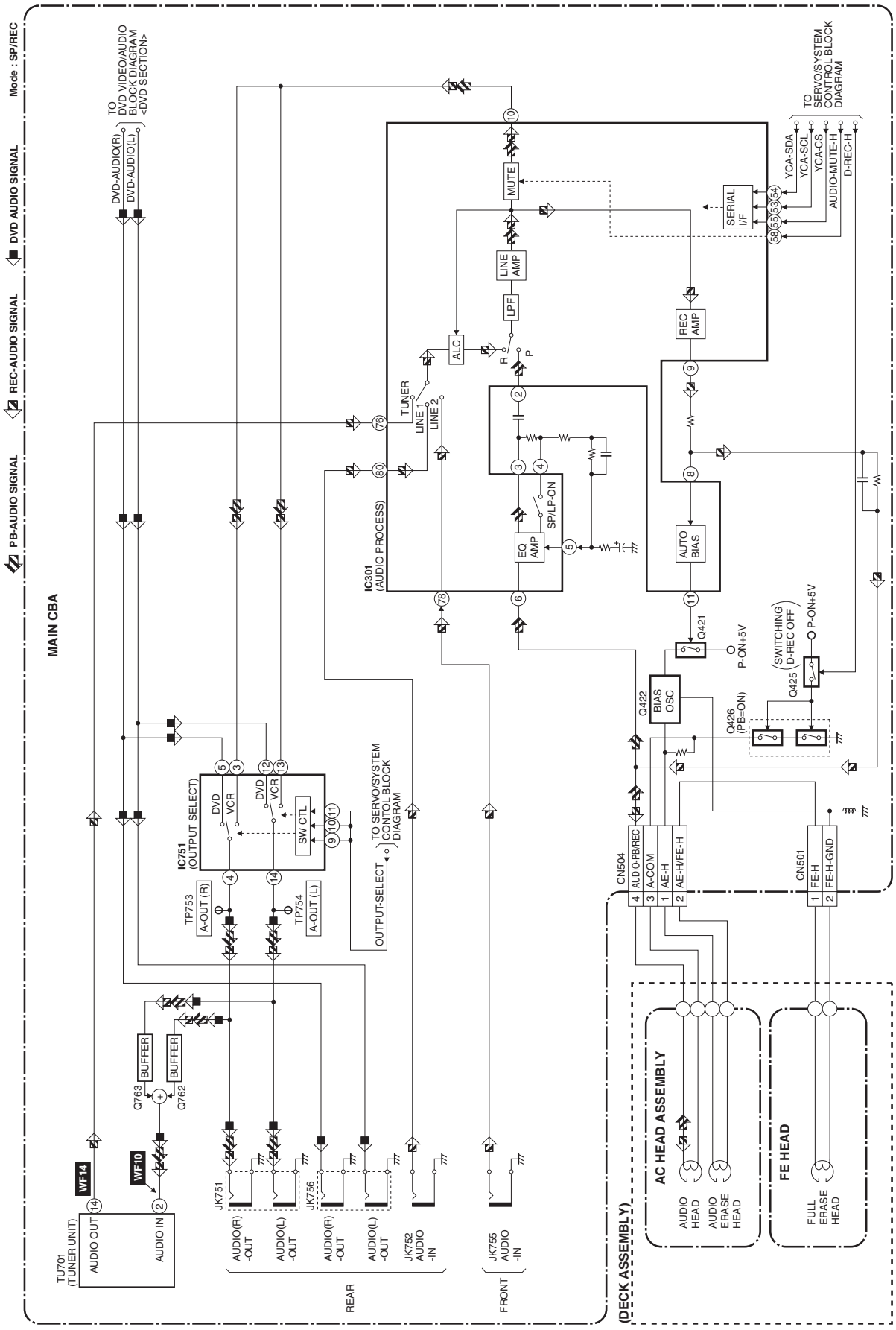
## Servo / System Control Block Diagram



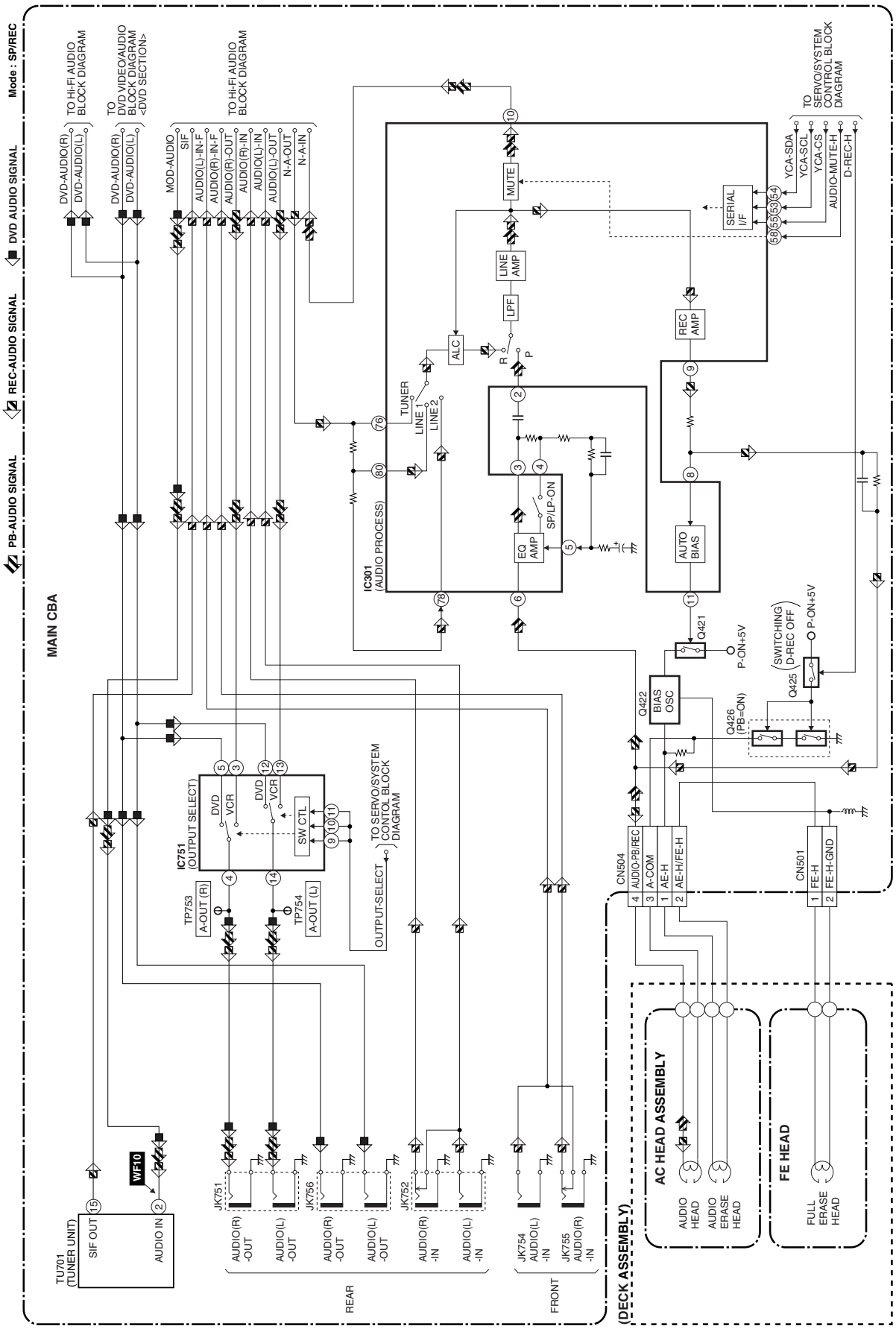
# Video Block Diagram



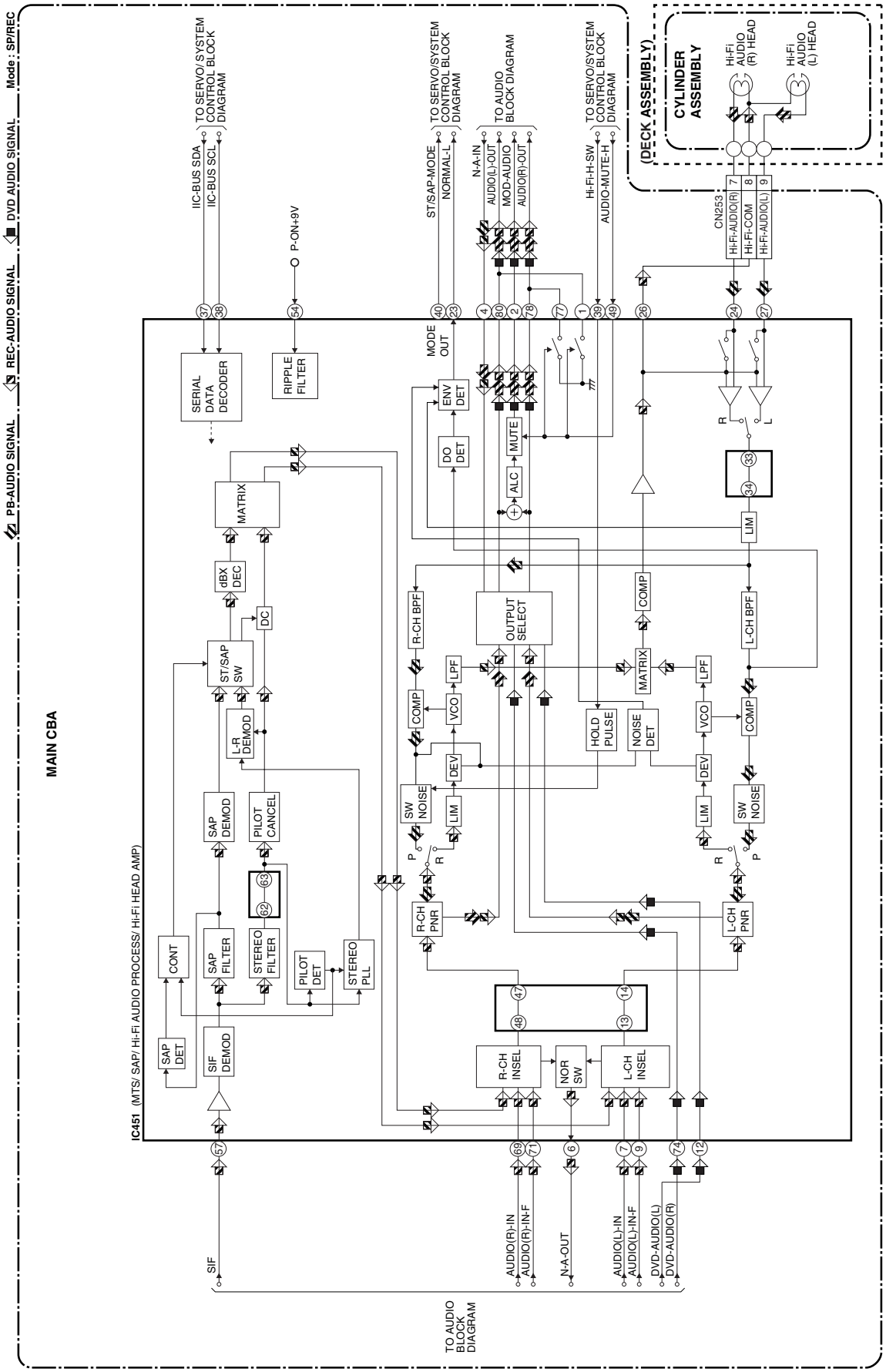
# Audio Block Diagram ( DVC840F, MWD2205 )



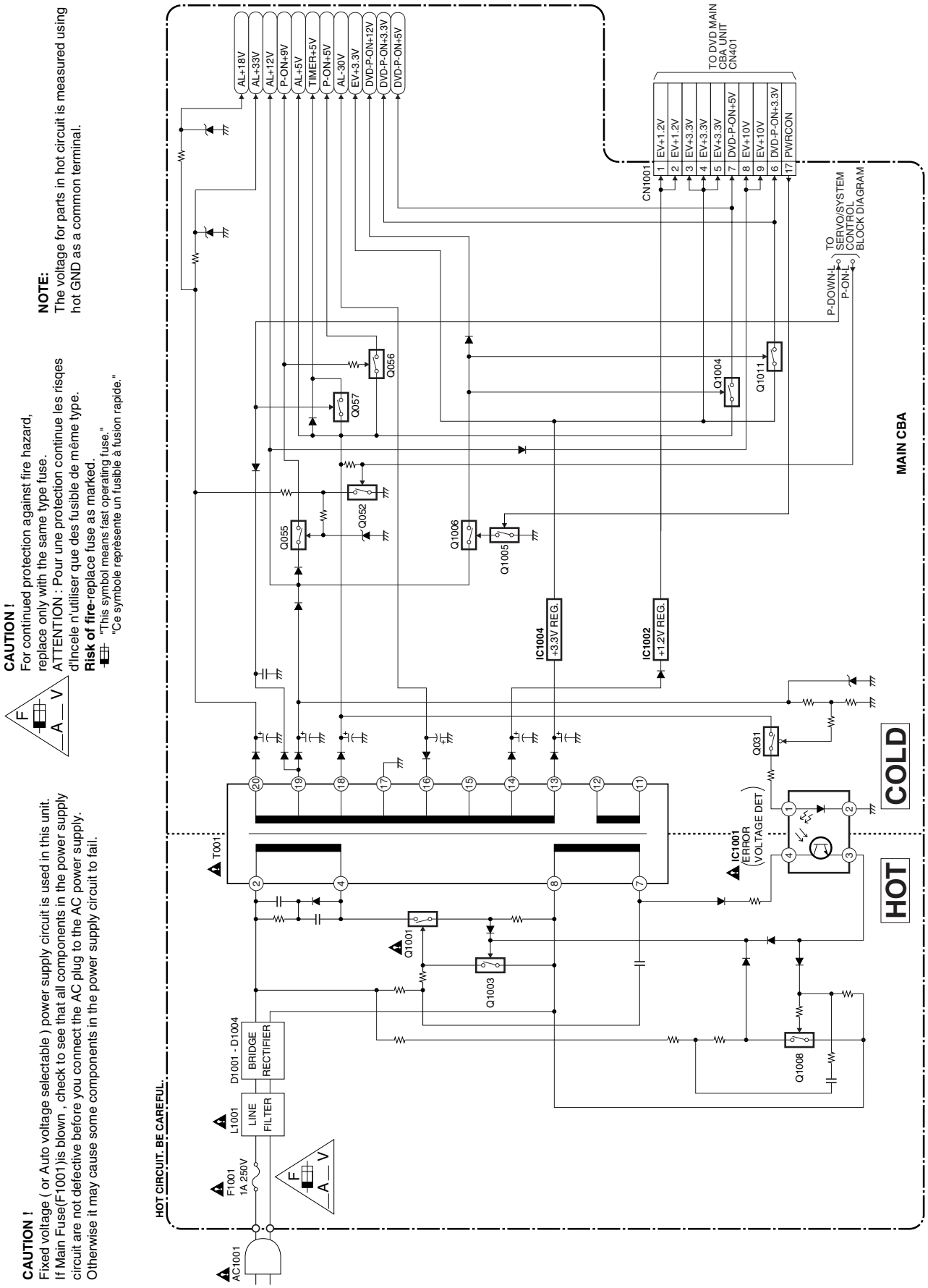
# Audio Block Diagram ( DVC865F )



# Hi-Fi Audio Block Diagram ( DVC865F )



# Power Supply Block Diagram



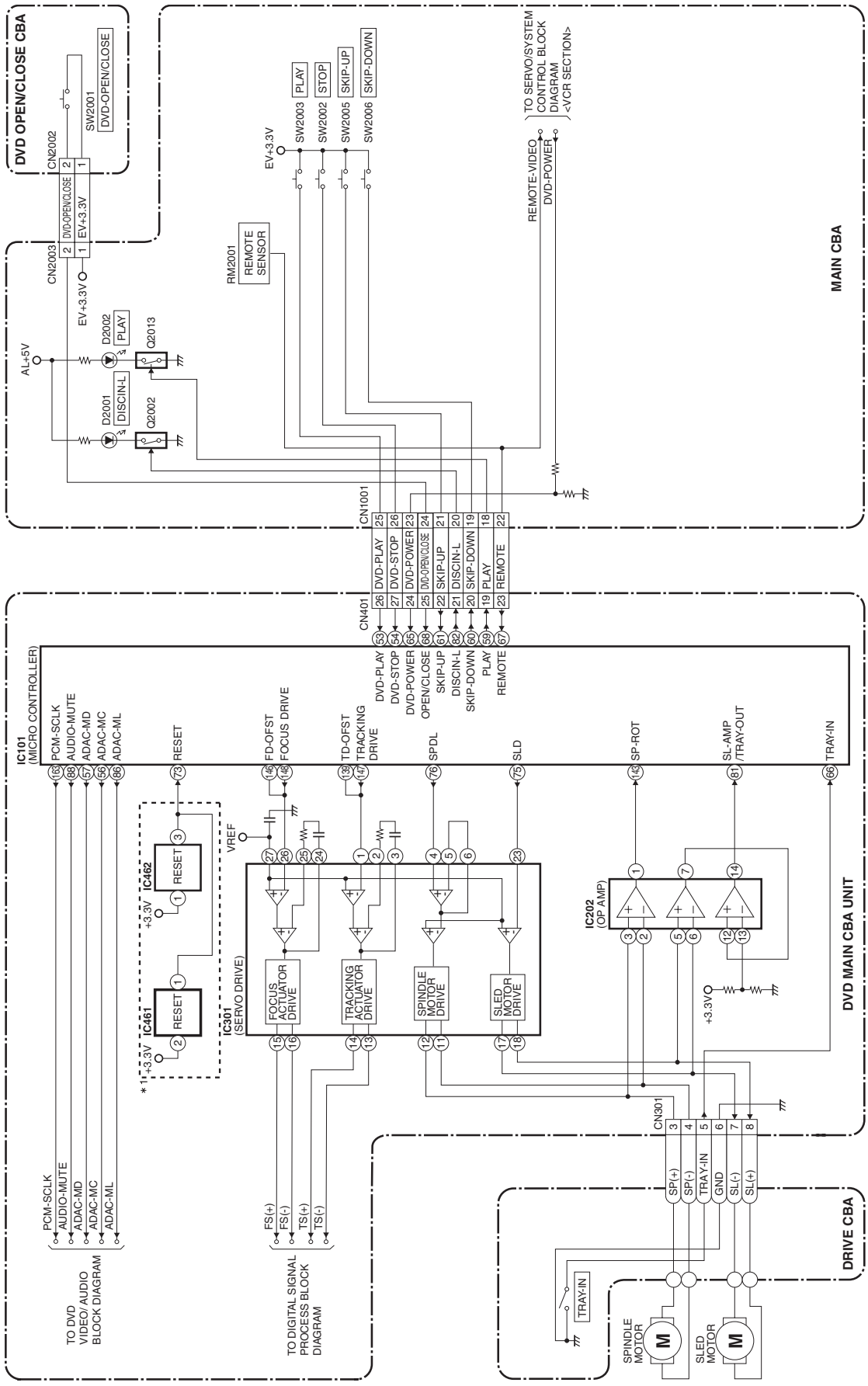

**CAUTION !**
Fixed voltage ( or Auto voltage selectable ) power supply circuit is used in this unit. If Main Fuse(F1001)is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

**CAUTION !**
For continued protection against fire hazard, replace only with the same type fuse.
ATTENTION : Pour une protection continue les risques d'incele n'utiliser que des fusible de même type.
**Risk of fire**-replace fuse as marked.
"This symbol means fast operating fuse."
"Ce symbole représente un fusible à fusion rapide."

**NOTE:**
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

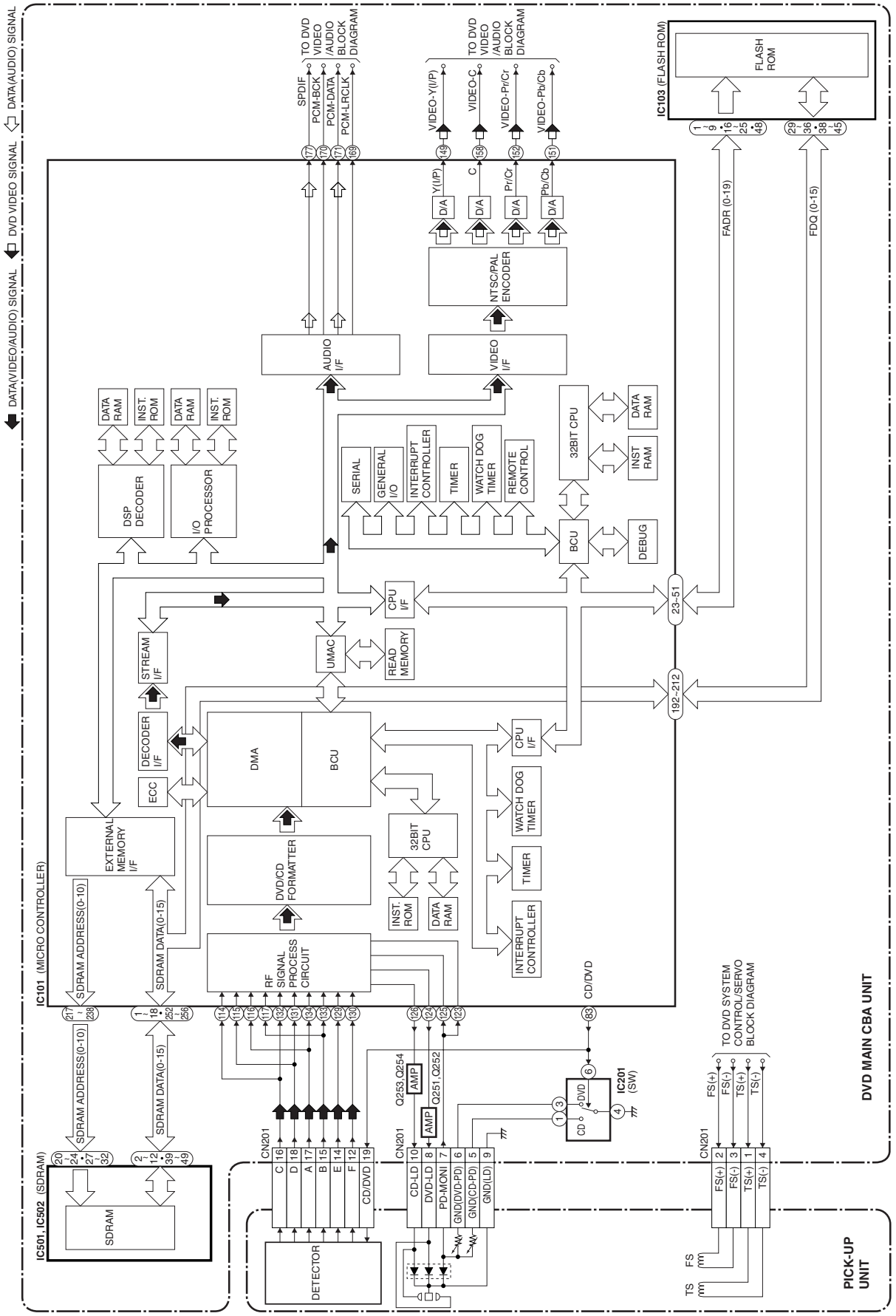
# BLOCK DIAGRAMS <DVD SECTION>

## DVD System Control / Servo Block Diagram

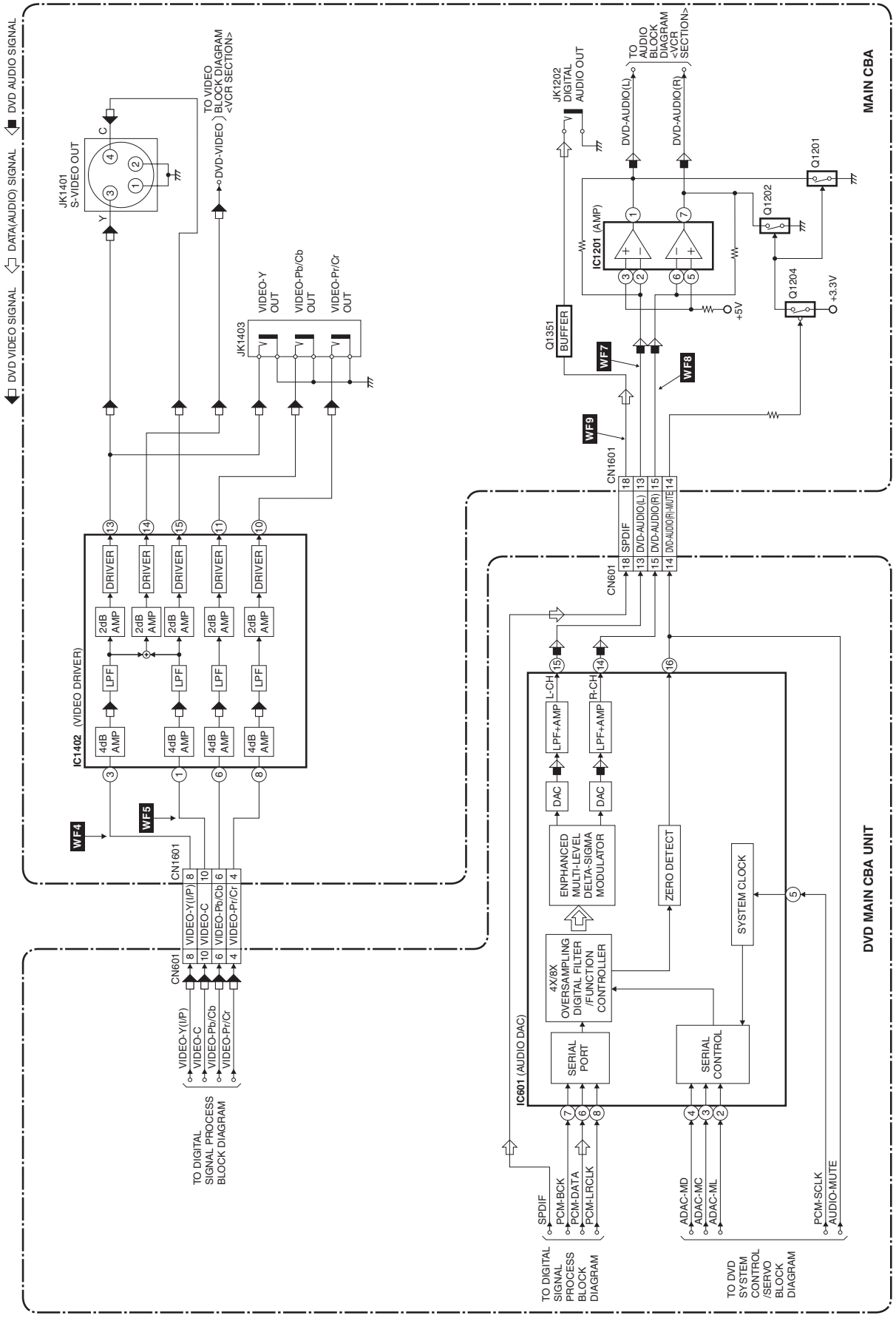



***1 NOTE:**
Either IC461 or IC462 is used for DVD MAIN CBA UNIT.

# Digital Signal Process Block Diagram



# DVD Video / Audio Block Diagram



# SCHEMATIC DIAGRAMS / CBA'S AND TEST POINTS

## Standard Notes

### WARNING

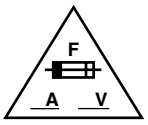
Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark "⚠" in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

### Notes:

1. Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.
2. All resistance values are indicated in ohms ($K = 10^3$, $M = 10^6$).
3. Resistor wattages are 1/4W or 1/6W unless otherwise specified.
4. All capacitance values are indicated in μF ($P = 10^{-6}$ μF).
5. All voltages are DC voltages unless otherwise specified.

## LIST OF CAUTION, NOTES, AND SYMBOLS USED IN THE SCHEMATIC DIAGRAMS ON THE FOLLOWING PAGES:

### 1. CAUTION:




FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQES D'INCELE N'UTILISER QUE DES FUSIBLE DE MÊME TYPE.
RISK OF FIRE-REPLACE FUSE AS MARKED.

This symbol means fast operating fuse.
Ce symbole reprèsente un fusible à fusion rapide.

### 2. CAUTION:

Fixed Voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1001) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

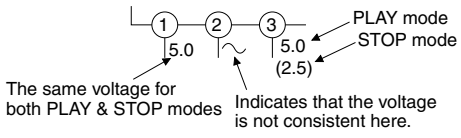
### 3. Note:

1. Do not use the part number shown on the drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since the drawings were prepared.
2. To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

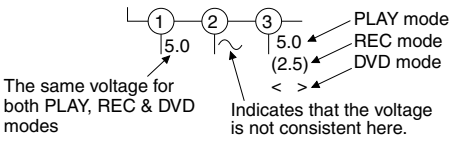
### 4. Mode: SP/REC

### 5. Voltage indications for PLAY and REC modes on the schematics are as shown below:

< DVD Section >




< VCR Section >

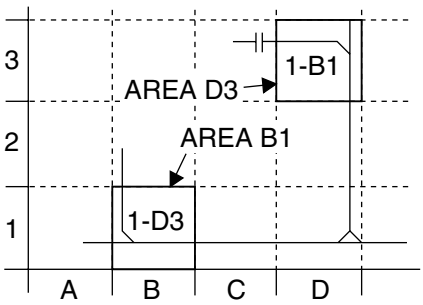



Unit: Volts

### 6. How to read converged lines

1-D3
- 1-D3 → Distinction Area
- 1-D3 → Line Number (1 to 3 digits)

Examples:
1. "1-D3" means that line number "1" goes to area "D3".
2. "1-B1" means that line number "1" goes to area "B1".




### 7. Test Point Information

: Indicates a test point with a jumper wire across a hole in the PCB.

: Used to indicate a test point with a component lead on foil side.

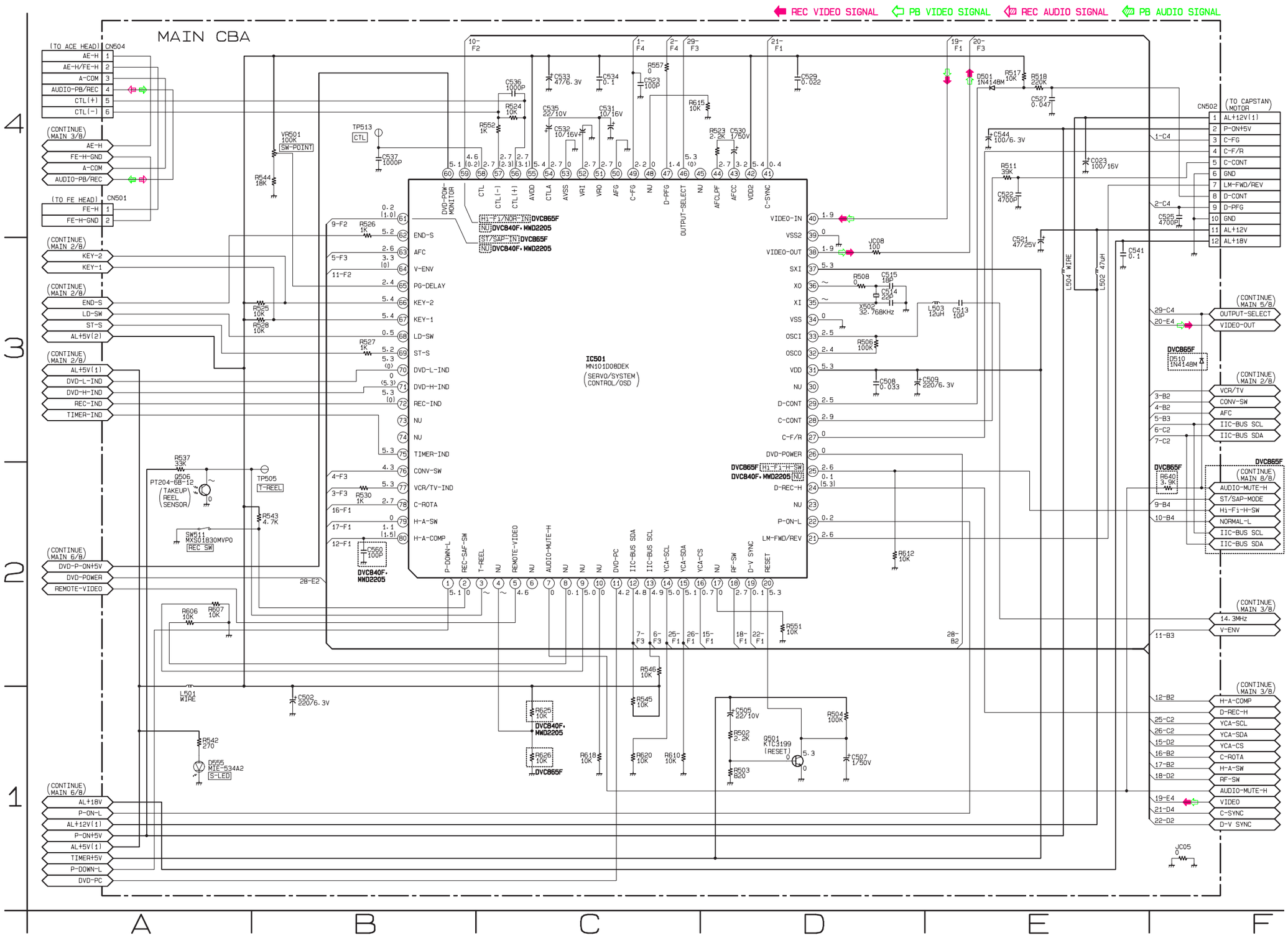
: Used to indicate a test point with no test pin.

: Used to indicate a test point with a test pin.

# Main 1/8 Schematic Diagram < VCR Section >

MAIN 1/8

| Ref No. | Position |
|---|---|
| IC | |
| IC501 | C-3 |
| TRANSISTORS | |
| Q501 | D-1 |
| Q506 | A-2 |
| CONNECTORS | |
| CN501 | A-4 |
| CN502 | F-4 |
| CN504 | A-4 |
| VARIABLE RESISTOR | |
| VR501 | B-4 |
| TEST POINTS | |
| TP505 | B-2 |
| TP513 | B-4 |



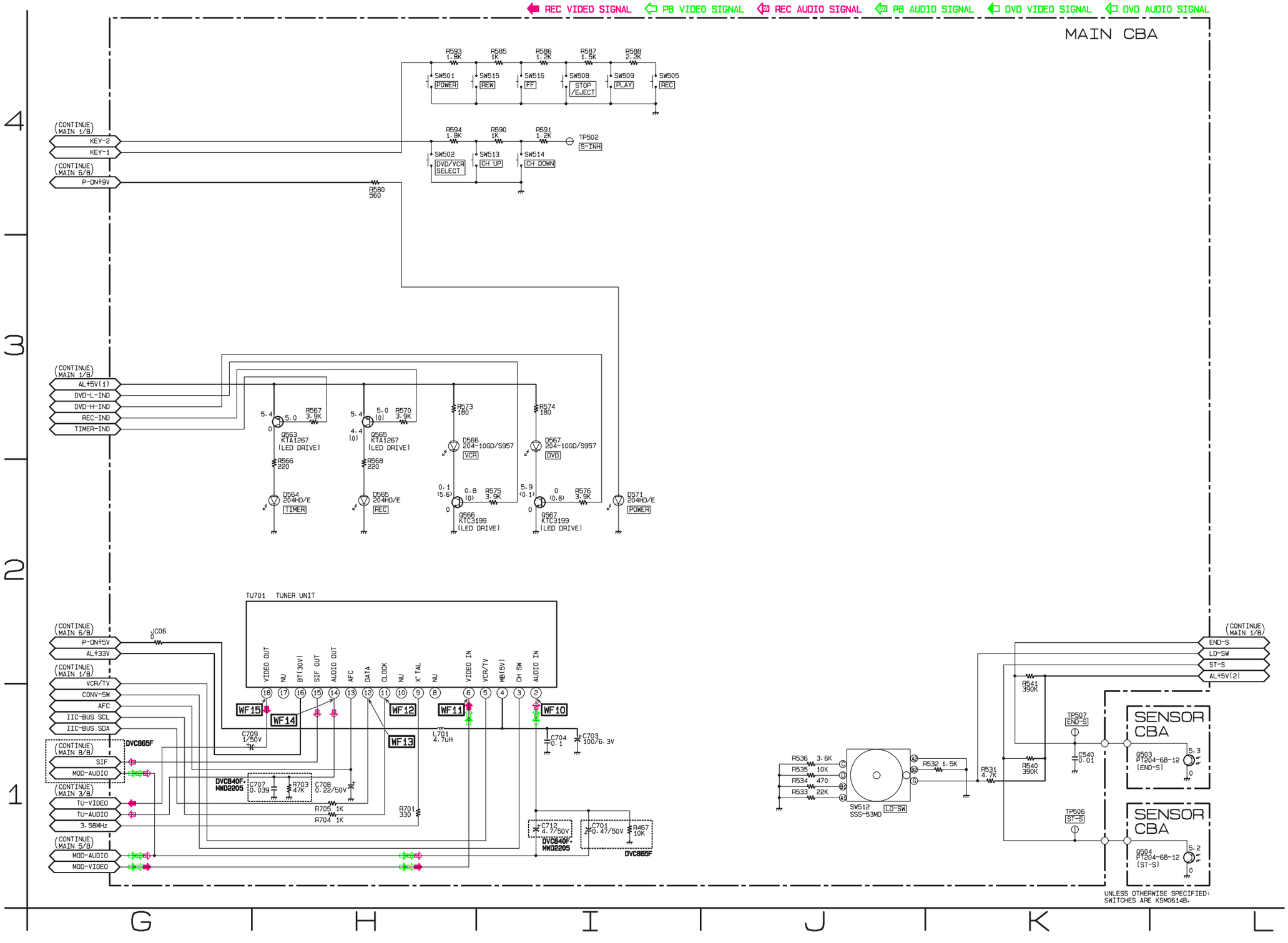



H9801SCM1

# Main 2/8 & Sensor Schematic Diagram < VCR Section >

MAIN 2/8

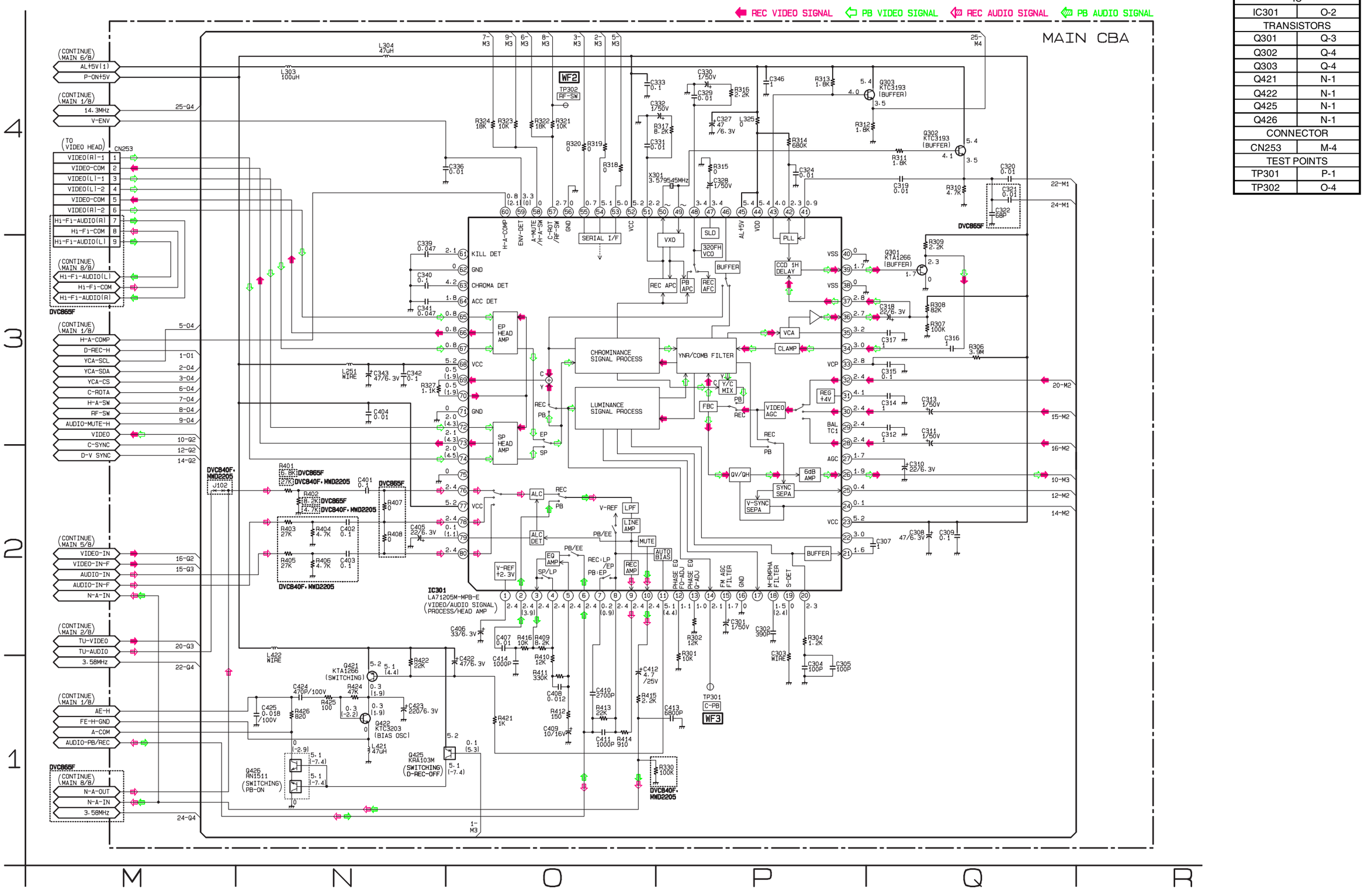
| Ref No. | Position |
|---|---|
| TRANSISTORS | |
| Q563 | H-3 |
| Q565 | H-3 |
| Q566 | H-2 |
| Q567 | I-2 |
| TEST POINTS | |
| TP502 | I-4 |
| TP506 | K-1 |
| TP507 | K-1 |



# Main 3/8 Schematic Diagram < VCR Section >

MAIN 3/8

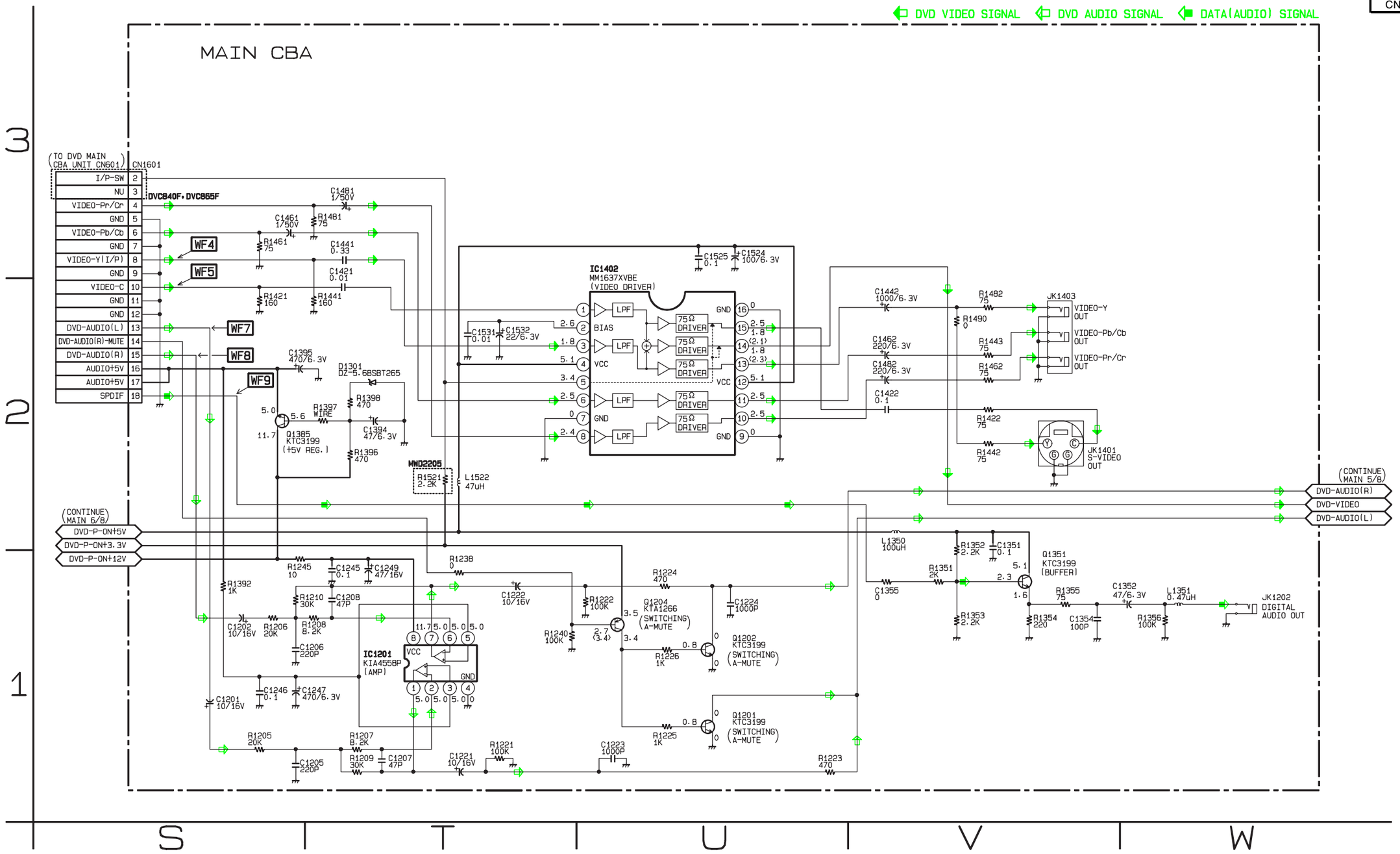
| Ref No. | Position |
|---|---|
| IC | |
| IC301 | O-2 |
| TRANSISTORS | |
| Q301 | Q-3 |
| Q302 | Q-4 |
| Q303 | Q-4 |
| Q421 | N-1 |
| Q422 | N-1 |
| Q425 | N-1 |
| Q426 | N-1 |
| CONNECTOR | |
| CN253 | M-4 |
| TEST POINTS | |
| TP301 | P-1 |
| TP302 | O-4 |



# Main 4/8 Schematic Diagram < VCR Section >

MAIN 4/8

| Ref No. | Position |
|---|---|
| ICS | |
| IC1201 | T-1 |
| IC1402 | U-3 |
| TRANSISTORS | |
| Q1201 | U-1 |
| Q1202 | U-1 |
| Q1204 | U-1 |
| Q1351 | V-1 |
| Q1385 | S-2 |
| CONNECTOR | |
| CN1601 | S-3 |



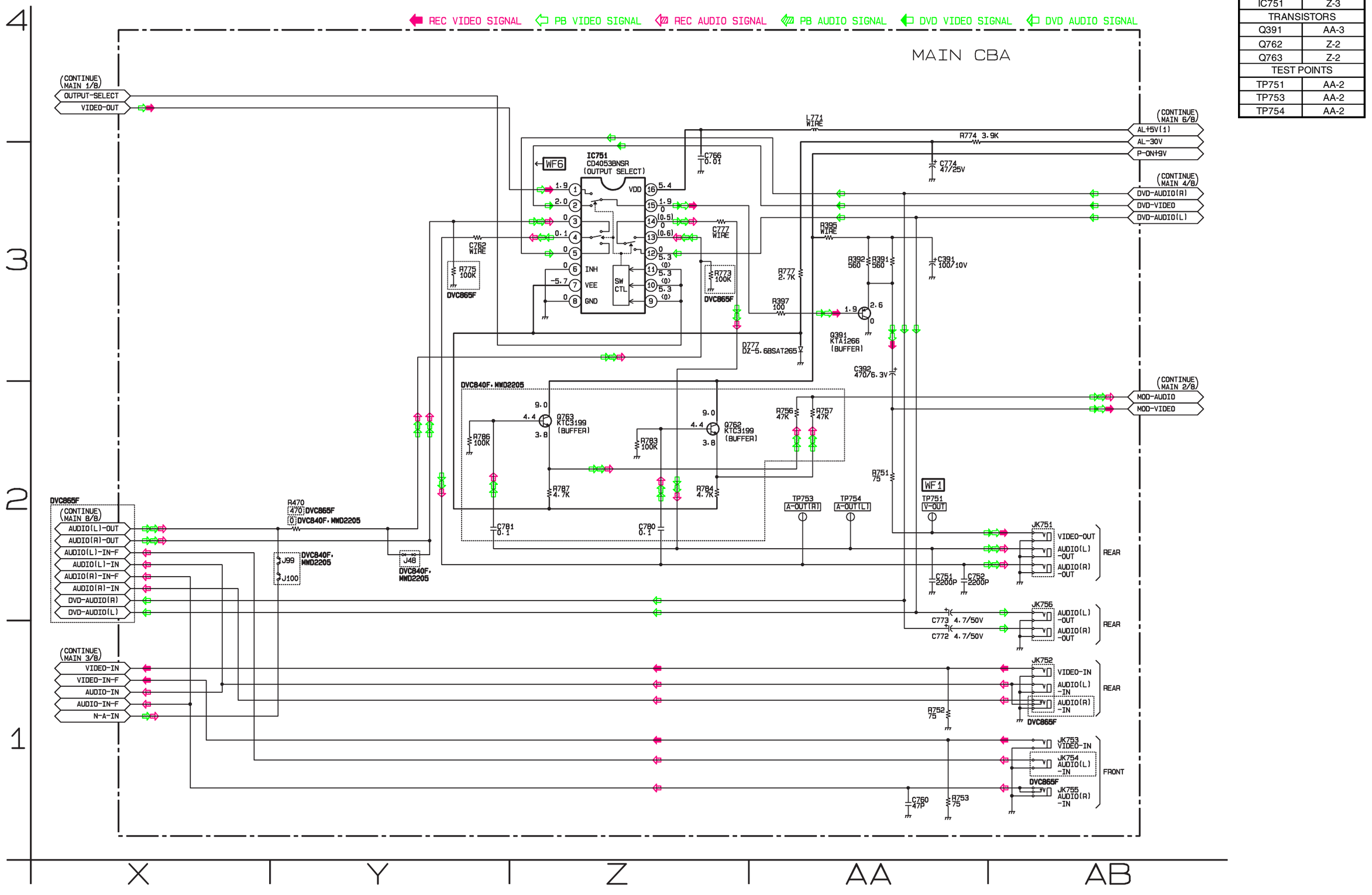



H9801SCM4

# Main 5/8 Schematic Diagram < VCR Section >

MAIN 5/8

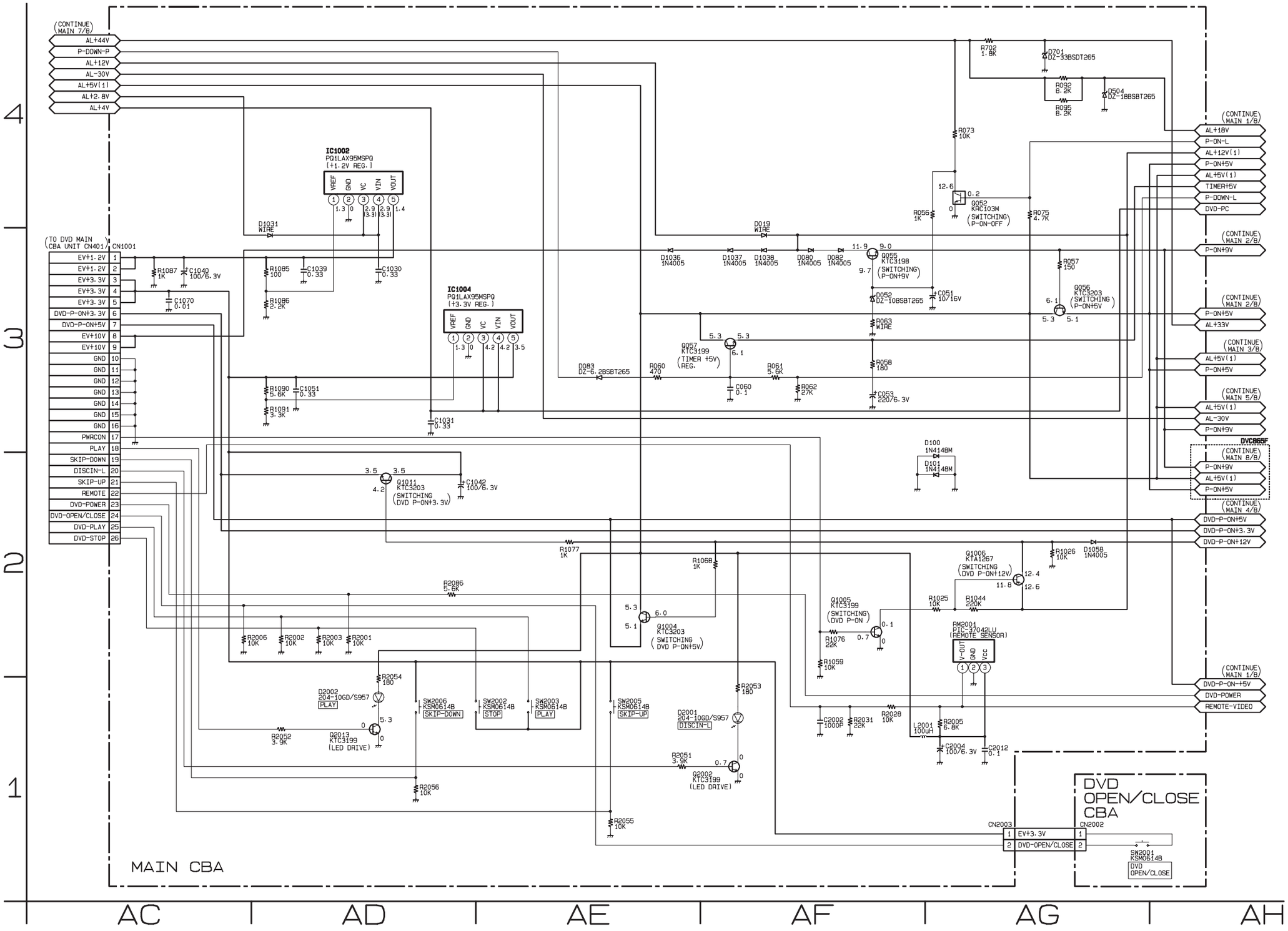
| Ref No. | Position |
|---|---|
| IC | |
| IC751 | Z-3 |
| TRANSISTORS | |
| Q391 | AA-3 |
| Q762 | Z-2 |
| Q763 | Z-2 |
| TEST POINTS | |
| TP751 | AA-2 |
| TP753 | AA-2 |
| TP754 | AA-2 |



# Main 6/8 & DVD Open/Close Schematic Diagram < VCR Section >

MAIN 6/8

| Ref No. | Position |
|---|---|
| ICS | |
| IC1002 | AD-4 |
| IC1004 | AD-3 |
| TRANSISTORS | |
| Q052 | AG-4 |
| Q055 | AF-3 |
| Q056 | AG-3 |
| Q057 | AE-3 |
| Q1004 | AE-2 |
| Q1005 | AF-2 |
| Q1006 | AG-2 |
| Q1011 | AD-2 |
| Q2002 | AF-1 |
| Q2013 | AD-1 |
| CONNECTORS | |
| CN1001 | AC-3 |
| CN2003 | AG-1 |






H9801SCM6

# Main 7/8 Schematic Diagram < VCR Section >

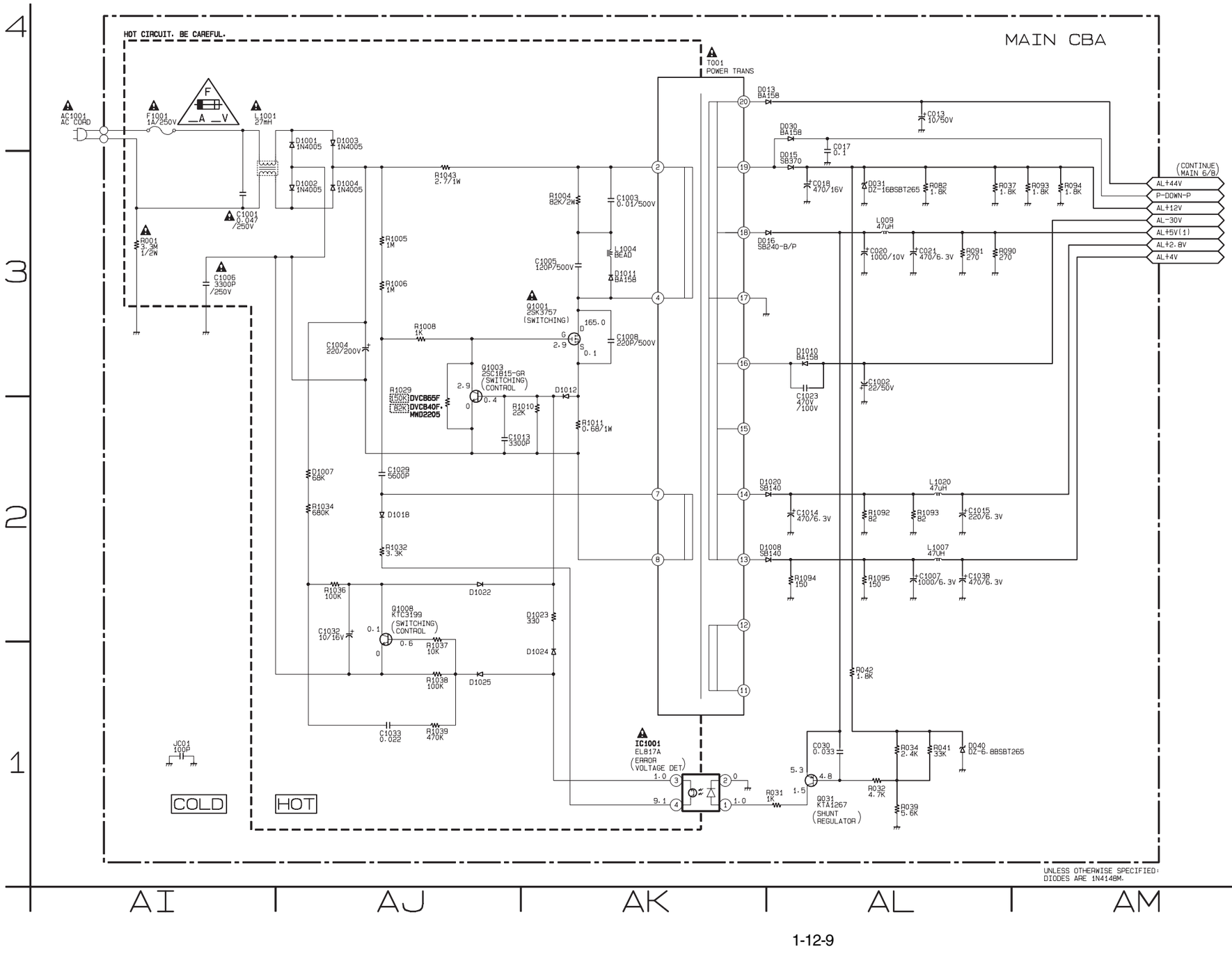
**CAUTION !**
Fixed voltage ( or Auto voltage selectable ) power supply circuit is used in this unit. If Main Fuse(F1001)is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

**CAUTION !**
For continued protection against fire hazard, replace only with the same type fuse.
ATTENTION : Pour une protection continue les risqes d'Incele n'utiliser que des fusible de même type.
**Risk of fire**-replace fuse as marked.
"This symbol means fast operating fuse."
"Ce symbole représente un fusible à fusion rapide."

**NOTE:**
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

MAIN 7/8

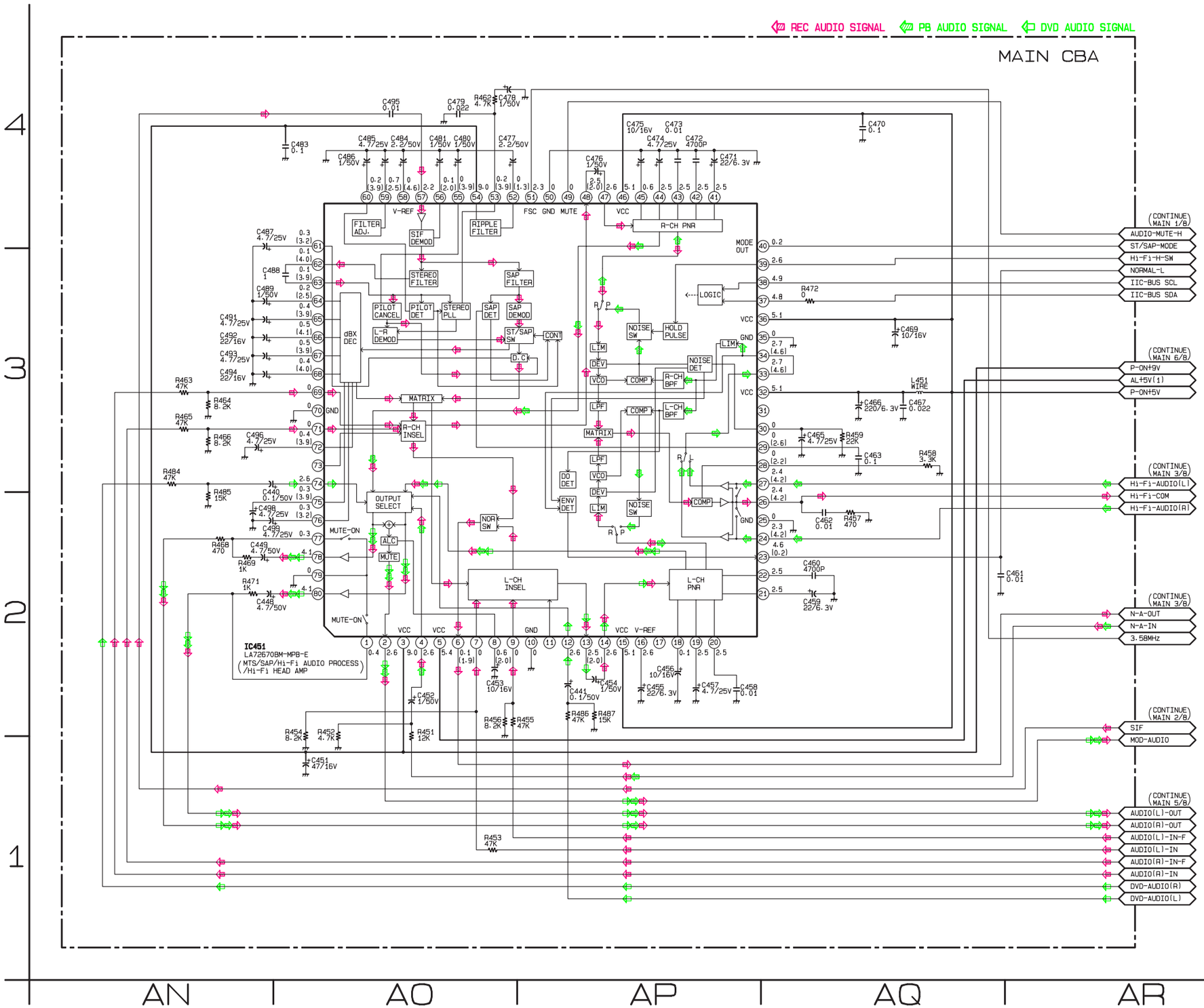
| Ref No. | Position |
|---|---|
| IC | |
| IC1001 | AK-1 |
| TRANSISTORS | |
| Q031 | AL-1 |
| Q1001 | AK-3 |
| Q1003 | AJ-3 |
| Q1008 | AJ-1 |






H9801SCM7

# Main 8/8 Schematic Diagram < VCR Section > ( DVC865F )

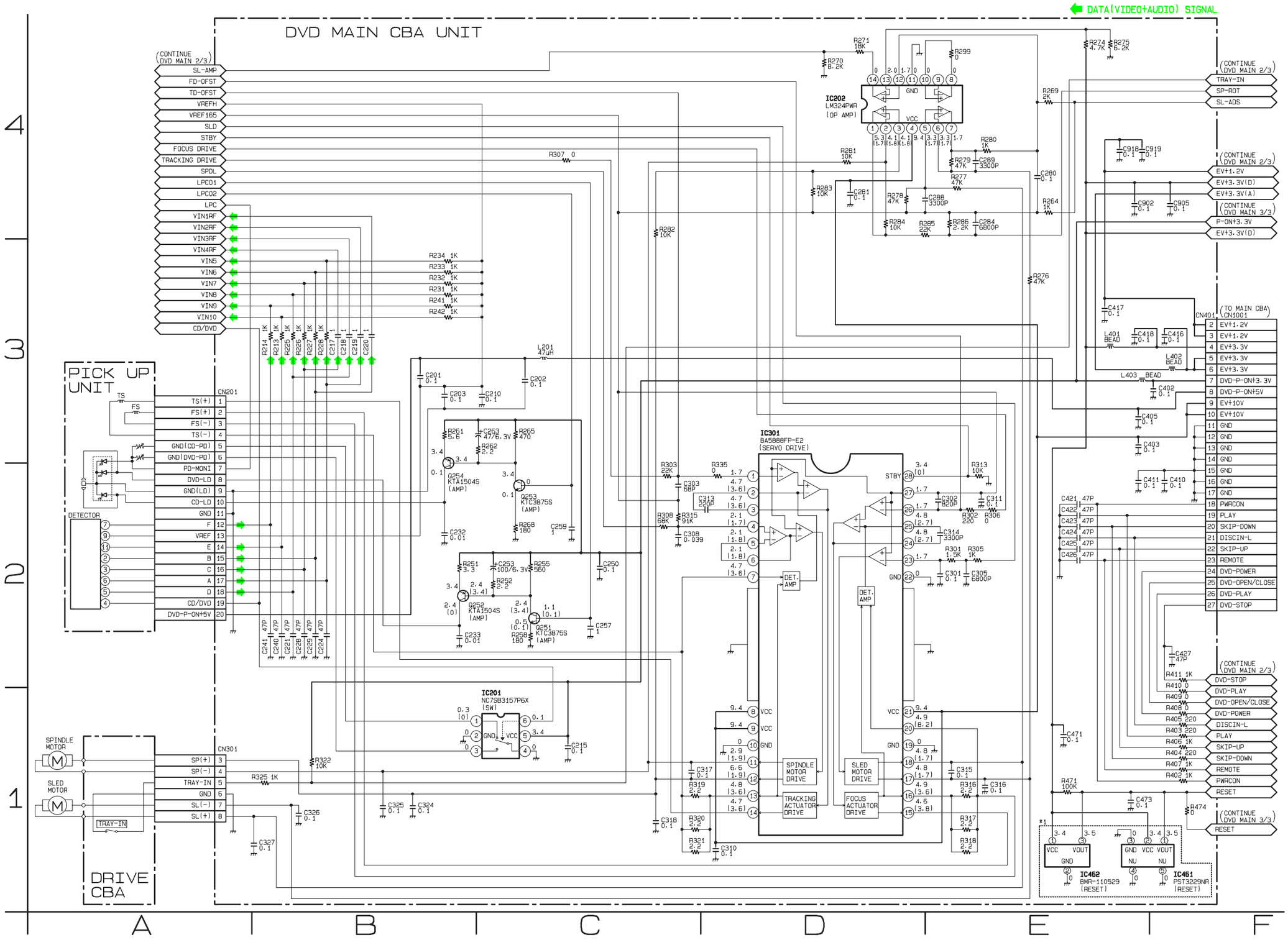


# DVD Main 1/3 Schematic Diagram < DVD Section >

***1 NOTE:**
Either IC461 or IC462 is used for DVD MAIN CBA UNIT.

DVD MAIN 1/3

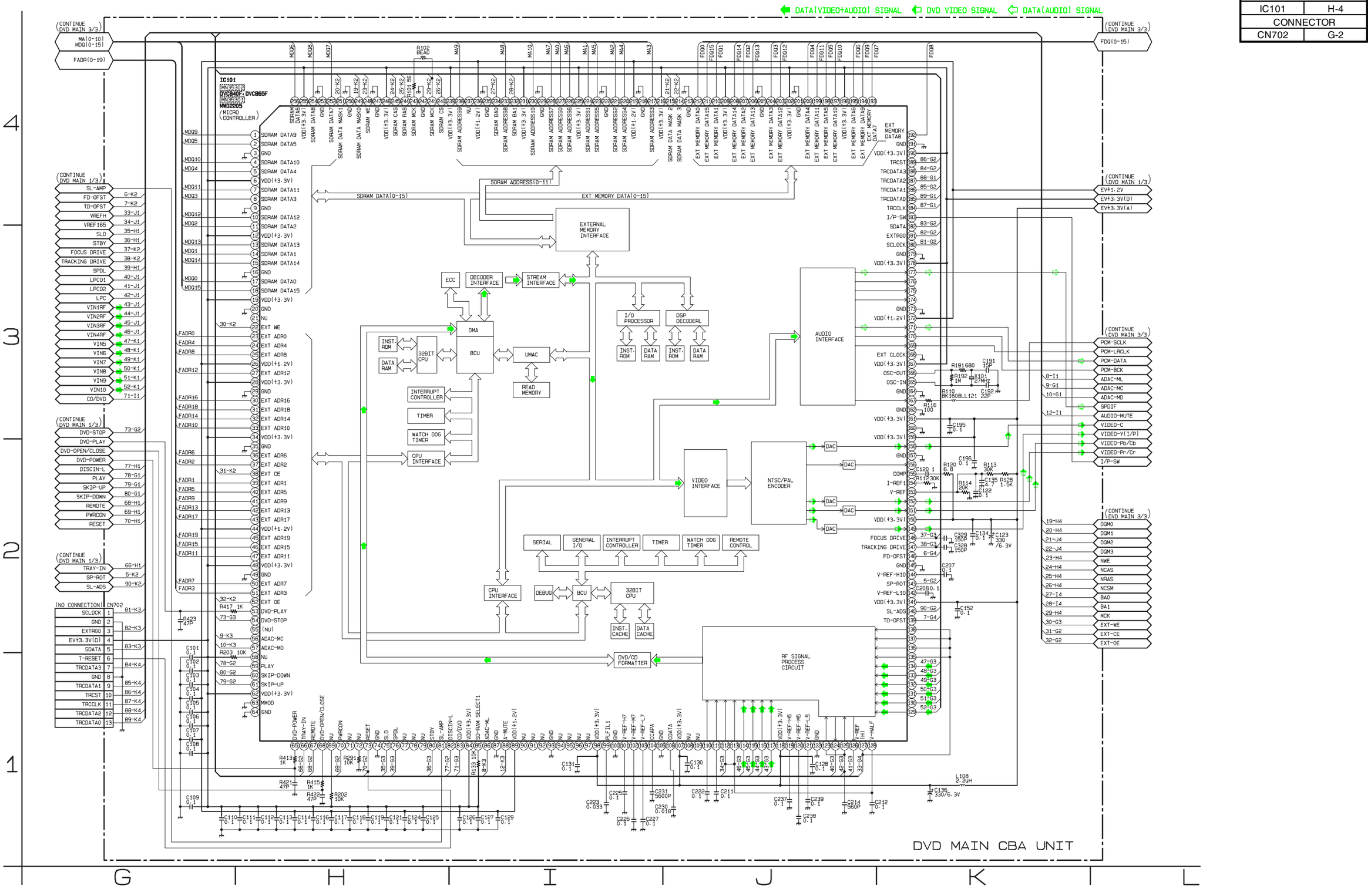
| Ref No. | Position |
|---|---|
| ICS | |
| IC201 | C-1 |
| IC202 | D-4 |
| IC301 | D-3 |
| IC461 | F-1 |
| IC462 | E-1 |
| TRANSISTORS | |
| Q251 | C-2 |
| Q252 | B-2 |
| Q253 | C-2 |
| Q254 | B-2 |
| CONNECTORS | |
| CN201 | A-3 |
| CN301 | A-1 |
| CN401 | F-3 |



# DVD Main 2/3 Schematic Diagram < DVD Section >

DVD MAIN 2/3

| Ref No. | Position |
|---|---|
| IC | |
| IC101 | H-4 |
| CONNECTOR | |
| CN702 | G-2 |



## IC101 Voltage Chart

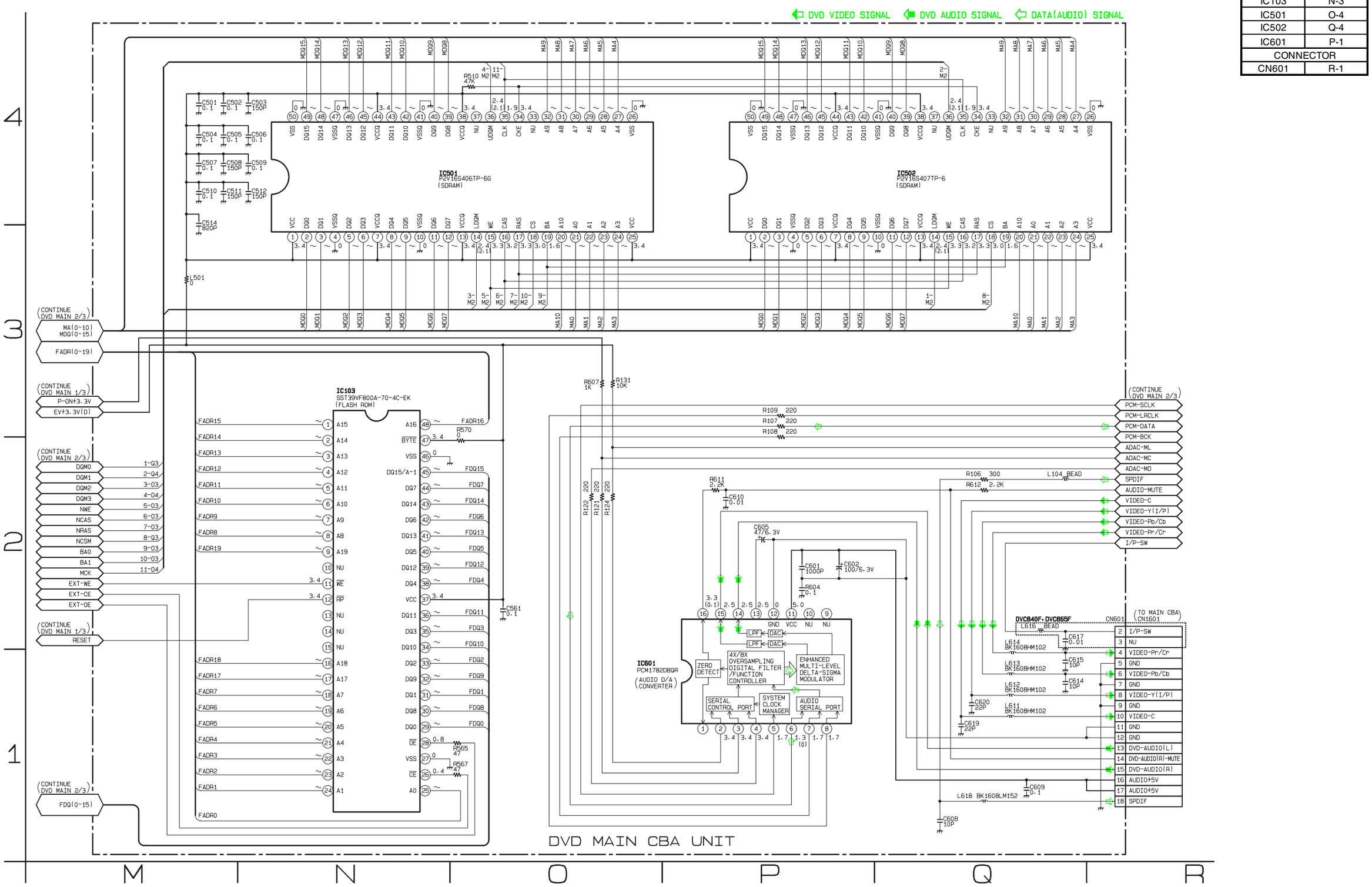
~ : Voltage is not consistent ----- : Not used Unit : Volts

| PIN.NO | PLAY | STOP | PIN.NO | PLAY | STOP | PIN.NO | PLAY | STOP | PIN.NO | PLAY | STOP | PIN.NO | PLAY | STOP | PIN.NO | PLAY | STOP | PIN.NO | PLAY | STOP | PIN.NO | PLAY | STOP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ~ | ~ | 33 | ~ | ~ | 65 | 0 | 0 | 97 | ----- | ----- | 129 | 2.3 | 2.3 | 161 | 3.4 | 3.4 | 193 | ~ | ~ | 225 | 3.4 | 3.4 |
| 2 | ~ | ~ | 34 | 3.4 | 3.4 | 66 | 3.4 | 3.5 | 98 | 3.4 | 3.4 | 130 | 2.3 | 2.3 | 162 | 0 | 0 | 194 | ~ | ~ | 226 | ~ | ~ |
| 3 | 0 | 0 | 35 | 0 | 0 | 67 | 3.2 | 3.2 | 99 | 0.9 | 0.8 | 131 | 2.3 | 2.3 | 163 | 1.8 | 1.8 | 195 | ~ | ~ | 227 | ~ | ~ |
| 4 | ~ | ~ | 36 | ~ | ~ | 68 | 0 | 0 | 100 | 0 | 0 | 132 | 2.4 | 2.3 | 164 | 0 | 0 | 196 | 3.4 | 3.4 | 228 | ~ | ~ |
| 5 | ~ | ~ | 37 | ~ | ~ | 69 | ----- | ----- | 101 | 2.4 | 2.4 | 133 | 2.4 | 2.4 | 165 | 1.7 | 1.8 | 197 | ~ | ~ | 229 | 0 | 0 |
| 6 | 3.4 | 3.4 | 38 | 0.4 | 0.3 | 70 | 3.4 | 3.4 | 102 | 2.2 | 2.2 | 134 | 2.4 | 2.4 | 166 | 1.7 | 1.7 | 198 | ~ | ~ | 230 | ~ | ~ |
| 7 | ~ | ~ | 39 | ~ | ~ | 71 | ----- | ----- | 103 | 1.9 | 1.9 | 135 | 2.3 | 2.3 | 167 | 3.4 | 3.4 | 199 | ~ | ~ | 231 | 3.4 | 3.4 |
| 8 | ~ | ~ | 40 | ~ | ~ | 72 | 1.4 | 2.7 | 104 | 0.4 | 0.3 | 136 | 2.3 | 2.3 | 168 | 0 | 0 | 200 | ~ | ~ | 232 | 1.3 | 1.6 |
| 9 | 0 | 0 | 41 | ~ | ~ | 73 | 3.4 | 3.4 | 105 | 0 | 0 | 137 | 2.3 | 2.3 | 169 | 1.8 | 1.8 | 201 | 0 | 0 | 233 | ~ | ~ |
| 10 | ~ | ~ | 42 | ~ | ~ | 74 | 0 | 0 | 106 | 1.7 | 1.7 | 138 | 2.3 | 2.3 | 170 | 1.7 | 1.7 | 202 | 3.4 | 3.4 | 234 | 1.9 | 2.3 |
| 11 | ~ | ~ | 43 | ~ | ~ | 75 | 1.7 | 1.8 | 107 | 3.4 | 3.4 | 139 | 1.7 | 1.7 | 171 | 1.3 | 0.1 | 203 | ~ | ~ | 235 | 0 | 0 |
| 12 | 3.4 | 3.4 | 44 | 1.3 | 1.3 | 76 | 2.3 | 1.8 | 108 | ----- | ----- | 140 | 1.7 | 1.7 | 172 | 1.3 | 1.3 | 204 | ~ | ~ | 236 | 1.3 | 1.3 |
| 13 | ~ | ~ | 45 | ~ | ~ | 77 | ----- | ----- | 109 | ----- | ----- | 141 | 3.4 | 3.4 | 173 | 0 | 0 | 205 | 0 | 0 | 237 | ----- | ----- |
| 14 | ~ | ~ | 46 | ~ | ~ | 78 | ----- | ----- | 110 | 1.9 | 1.9 | 142 | 1.3 | 1.3 | 174 | ----- | ----- | 206 | ~ | ~ | 238 | ~ | ~ |
| 15 | ~ | ~ | 47 | ~ | ~ | 79 | ----- | ----- | 111 | 1.9 | 1.9 | 143 | 2.1 | 1.7 | 175 | ----- | ----- | 207 | ~ | ~ | 239 | 3.4 | 3.4 |
| 16 | 0 | 0 | 48 | 3.4 | 3.4 | 80 | 3.4 | 0.1 | 112 | 1.7 | 1.7 | 144 | 2.2 | 2.2 | 176 | ----- | ----- | 208 | ~ | ~ | 240 | 3.4 | 3.3 |
| 17 | ~ | ~ | 49 | 0 | 0 | 81 | 0.1 | 0.1 | 113 | 1.7 | 1.7 | 145 | 0 | 0 | 177 | 1.8 | 1.7 | 209 | 3.4 | 3.4 | 241 | 1.9 | 1.9 |
| 18 | ~ | ~ | 50 | ~ | ~ | 82 | 0 | 0 | 114 | 1.7 | 1.7 | 146 | 1.7 | 1.7 | 178 | 3.4 | 3.5 | 210 | ~ | ~ | 242 | 0 | 0 |
| 19 | 3.4 | 3.4 | 51 | ~ | ~ | 83 | 0.1 | 0.1 | 115 | 1.7 | 1.7 | 147 | 1.8 | 1.7 | 179 | 0 | 0 | 211 | ~ | ~ | 243 | 1.9 | 1.9 |
| 20 | 0 | 0 | 52 | 0.8 | 0.8 | 84 | 3.4 | 3.4 | 116 | 1.7 | 1.7 | 148 | 1.7 | 1.7 | 180 | 3.5 | 3.4 | 212 | ~ | ~ | 244 | 3.4 | 3.3 |
| 21 | ----- | ----- | 53 | 0 | 0 | 85 | 0.1 | 0.1 | 117 | 1.7 | 1.7 | 149 | 0.6 | 0.5 | 181 | 0 | 0 | 213 | 0 | 0 | 245 | 3.4 | 3.4 |
| 22 | 3.5 | 3.5 | 54 | 0 | 0 | 86 | 3.6 | 3.4 | 118 | 3.4 | 3.4 | 150 | 3.4 | 3.4 | 182 | 3.5 | 3.5 | 214 | 2.5 | 3.0 | 246 | 3.4 | 3.4 |
| 23 | ~ | ~ | 55 | ----- | ----- | 87 | 0 | 0 | 119 | 2.0 | 2.0 | 151 | 0.5 | 0.6 | 90 | 3.5 | 3.5 | 215 | 2.5 | 3.0 | 247 | 0 | 0 |
| 24 | ~ | ~ | 56 | 3.4 | 3.4 | 88 | 3.5 | 0.1 | 120 | 1.7 | 1.7 | 152 | 0.5 | 0.4 | 184 | 0 | 0 | 216 | 3.4 | 3.4 | 248 | 3.3 | 3.4 |
| 25 | ~ | ~ | 57 | 3.5 | 3.5 | 89 | 1.3 | 1.3 | 121 | 1.5 | 1.5 | 153 | 1.4 | 1.3 | 185 | 0 | 0 | 217 | ~ | ~ | 249 | 3.2 | 3 |
| 26 | 1.3 | 1.3 | 58 | ----- | ----- | 90 | ----- | ----- | 122 | 0 | 0 | 154 | 1.4 | 1.3 | 186 | 0 | 0 | 218 | 0 | 0 | 250 | 0 | 0 |
| 27 | ~ | ~ | 59 | 0.6 | 3.4 | 91 | ----- | ----- | 123 | 0.3 | 0.1 | 155 | 2.4 | 2.4 | 187 | 0 | 0 | 219 | 1.3 | 1.3 | 251 | 3.2 | 3.0 |
| 28 | 3.4 | 3.4 | 60 | 0 | 0 | 92 | ----- | ----- | 124 | 1.2 | 0.1 | 156 | ----- | ----- | 188 | 0 | 0 | 220 | ~ | ~ | 252 | ~ | ~ |
| 29 | 0 | 0 | 61 | 0 | 0 | 93 | 0 | 0 | 125 | 0.3 | 0.1 | 157 | 0 | 0 | 189 | 0 | 0 | 221 | ~ | ~ | 253 | 0 | 0 |
| 30 | ~ | ~ | 62 | 3.4 | 3.4 | 94 | ----- | ----- | 126 | 0.1 | 0.1 | 158 | 0.9 | 0.9 | 190 | 3.4 | 3.5 | 222 | 0 | 0 | 254 | ~ | ~ |
| 31 | ~ | ~ | 63 | 0 | 0 | 95 | ----- | ----- | 127 | 2.3 | 2.3 | 159 | 3.4 | 3.4 | 191 | 0 | 0 | 223 | ~ | ~ | 255 | 3.4 | 3.4 |
| 32 | ~ | ~ | 64 | 0 | 0 | 96 | ----- | ----- | 128 | 1.7 | 1.7 | 160 | 0 | 0 | 192 | ~ | ~ | 224 | ~ | ~ | 256 | ~ | ~ |

# DVD Main 3/3 Schematic Diagram < DVD Section >

DVD MAIN 3/3

| Ref No. | Position |
|---|---|
| ICS | |
| IC103 | N-3 |
| IC501 | O-4 |
| IC502 | Q-4 |
| IC601 | P-1 |
| CONNECTOR | |
| CN601 | R-1 |






H9801SCD3

## Main CBA Top View

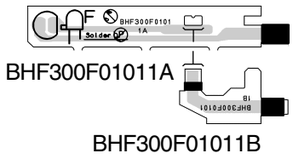
**CAUTION !**
Fixed voltage ( or Auto voltage selectable ) power supply circuit is used in this unit.
If Main Fuse(F1001)is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

**CAUTION !**
For continued protection against fire hazard,
replace only with the same type fuse.
ATTENTION : Pour une protection continue les risqes d'Incele n'utiliser que des fusible de même type.
**Risk of fire**-replace fuse as marked.
"This symbol means fast operating fuse."
"Ce symbole représente un fusible à fusion rapide."

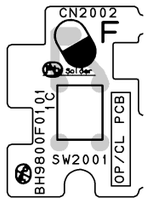
**Because a hot chassis ground is present in the power supply circut, an isolation transformer must be used. Also, in order to have the ability to increase the input slowly, when troubleshooting this type power supply circuit, a variable isolation transformer is required.**

**NOTE:**
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

## Sensor CBA Top View




## DVD Open/Close CBA Top View

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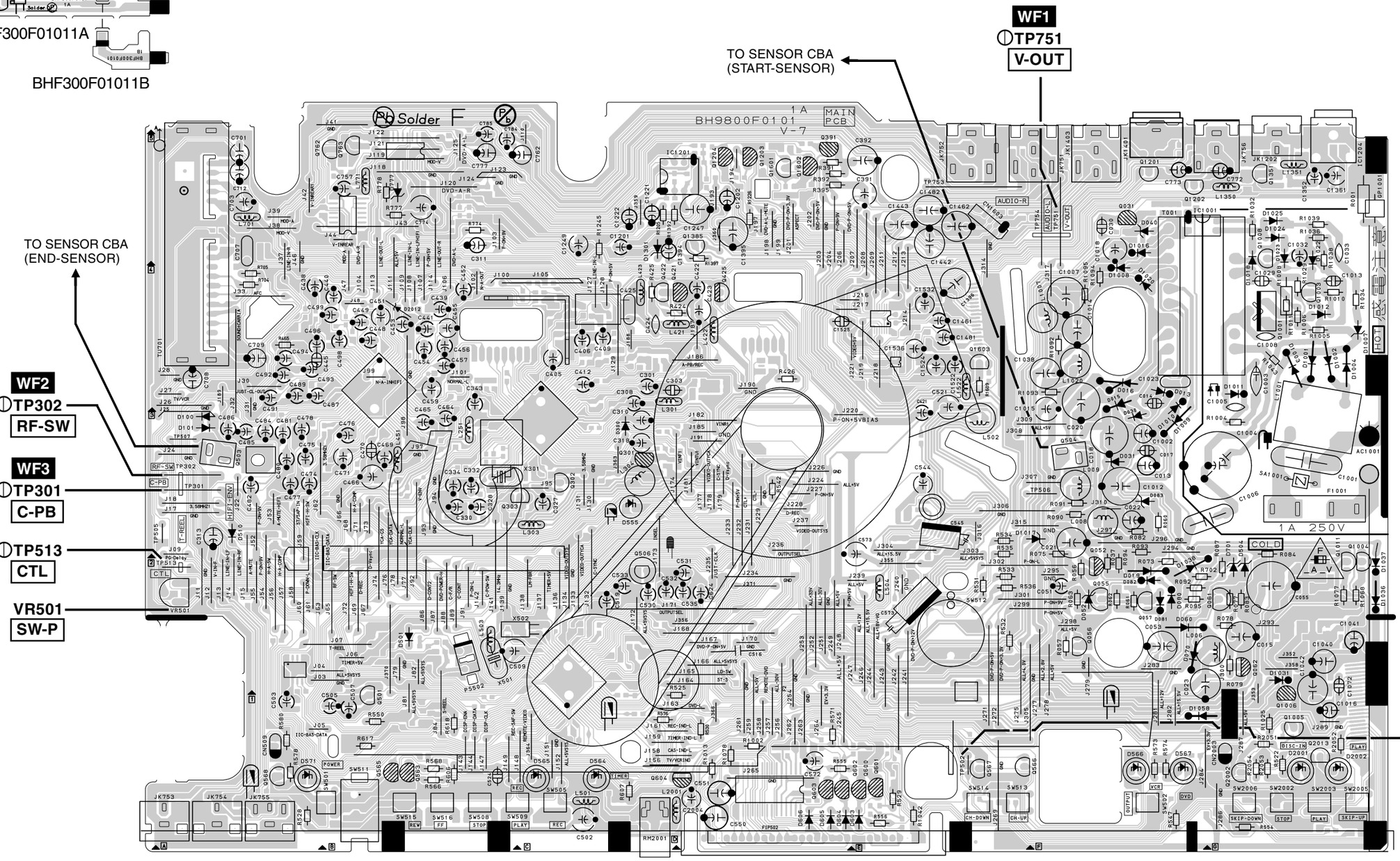
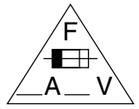


# Main CBA Bottom View

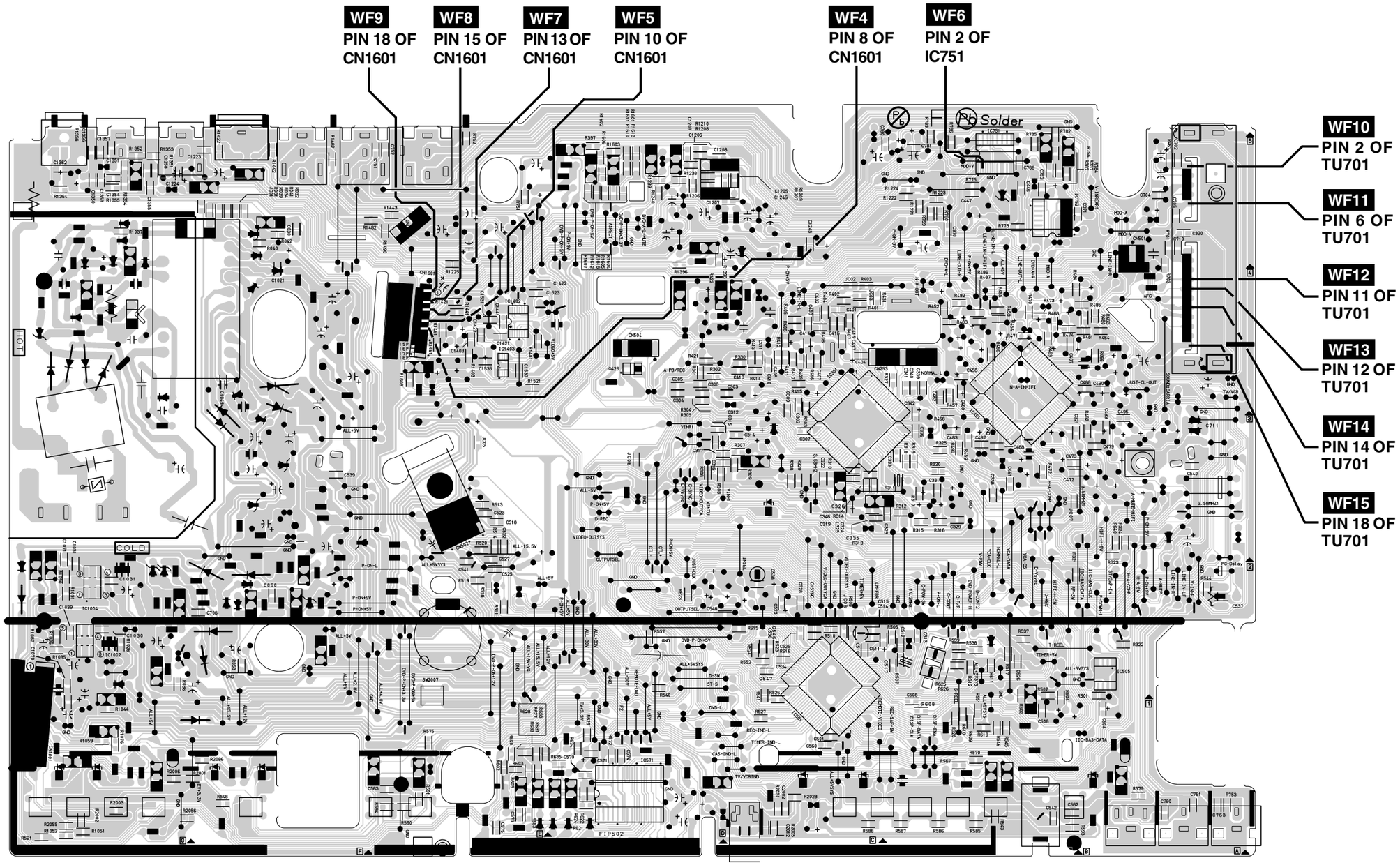
**CAUTION !**
Fixed voltage ( or Auto voltage selectable ) power supply circuit is used in this unit. If Main Fuse(F1001)is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.




**CAUTION !**
For continued protection against fire hazard, replace only with the same type fuse.
ATTENTION : Pour une protection continue les risqes d'Incele n'utiliser que des fusible de même type.
**Risk of fire**-replace fuse as marked.
"This symbol means fast operating fuse."
"Ce symbole représente un fusible à fusion rapide."

**Because a hot chassis ground is present in the power supply circut, an isolation transformer must be used. Also, in order to have the ability to increase the input slowly, when troubleshooting this type power supply circuit, a variable isolation transformer is required.**

**NOTE:**
The voltage for parts in hot circuit is measured using hot GND as a common terminal.




MAIN CBA

| Ref No. | Position |
|---|---|
| ICS | |
| IC301 | C-4 |
| IC451 | B-4 |
| IC501 | C-1 |
| IC751 | B-5 |
| IC1001 | F-5 |
| IC1002 | G-2 |
| IC1004 | G-2 |
| IC1201 | C-5 |
| IC1402 | E-4 |
| TRANSISTORS | |
| Q031 | F-5 |
| Q052 | F-3 |
| Q055 | F-2 |
| Q056 | F-2 |
| Q057 | F-2 |
| Q301 | C-3 |
| Q302 | C-3 |
| Q303 | B-3 |
| Q391 | D-5 |
| Q421 | D-4 |
| Q422 | C-4 |
| Q425 | D-4 |
| Q426 | D-4 |
| Q501 | B-1 |
| Q506 | C-3 |
| Q563 | B-1 |
| Q565 | B-1 |
| Q566 | F-1 |
| Q567 | E-1 |
| Q762 | A-5 |
| Q763 | B-5 |
| Q1001 | G-4 |
| Q1003 | G-4 |
| Q1004 | G-3 |
| Q1005 | G-1 |
| Q1006 | G-1 |
| Q1008 | G-5 |
| Q1011 | G-3 |
| Q1201 | F-5 |
| Q1202 | F-5 |
| Q1204 | D-5 |
| Q1351 | G-5 |
| Q1385 | D-5 |
| Q2002 | G-1 |
| Q2013 | G-1 |
| CONNECTORS | |
| CN253 | C-4 |
| CN501 | A-5 |
| CN502 | E-3 |
| CN504 | D-4 |
| CN1001 | G-1 |
| CN1601 | E-4 |
| CN2003 | G-1 |
| VARIABLE RESISTOR | |
| VR501 | A-2 |
| TEST POINTS | |
| TP301 | A-3 |
| TP302 | A-3 |
| TP502 | E-1 |
| TP505 | A-3 |
| TP506 | F-3 |
| TP507 | A-3 |
| TP513 | A-2 |
| TP751 | F-5 |

# WAVEFORMS

**NOTE:**

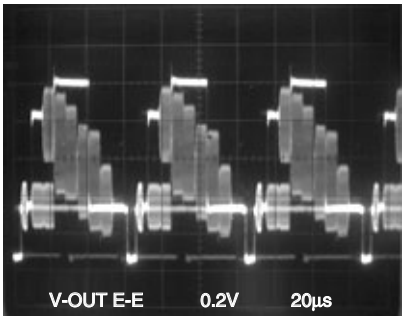
Input

VCR: COLOR BAR SIGNAL (WITH 1KHz AUDIO SIGNAL)
(WF1~WF3, WF10~WF15)

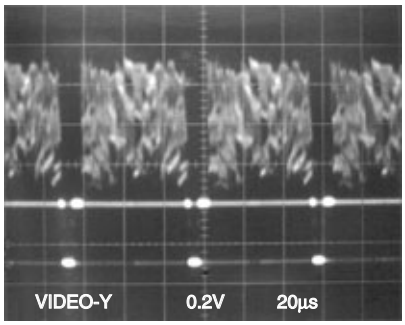
DVD: POWER ON (STOP) MODE
(WF4~WF6)

CD: 1kHz PLAY
(WF7~WF9)

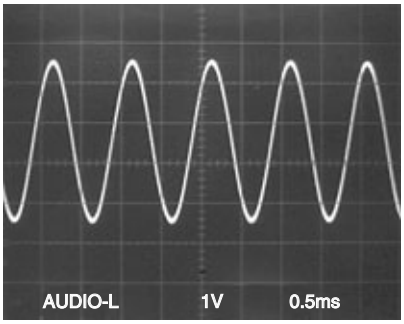
**WF1** TP751




**WF4** Pin 8 of CN1601

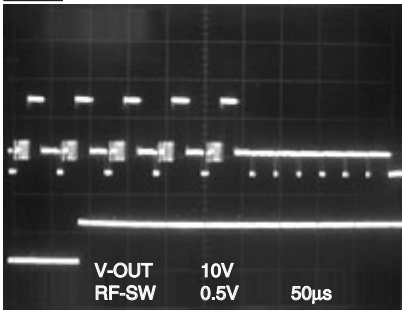



**WF7** Pin 13 of CN1601

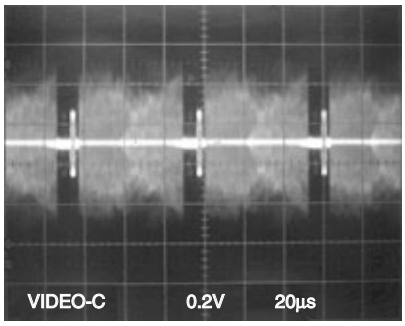



**WF1** UPPER TP751

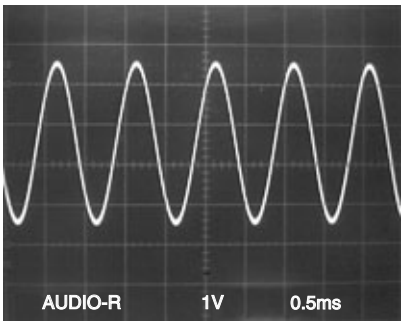
**WF2** LOWER TP302




**WF5** Pin 10 of CN1601

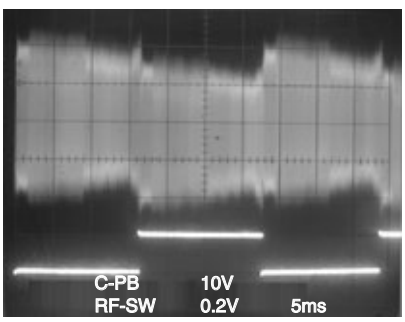



**WF8** Pin 15 of CN1601

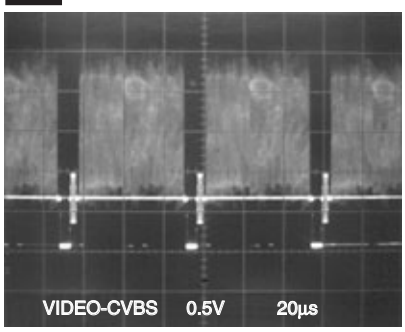



**WF3** UPPER TP301

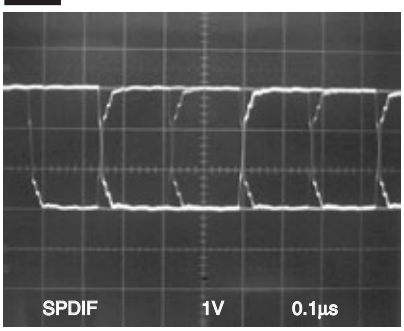
**WF2** LOWER TP302




**WF6** Pin 2 of IC751




**WF9** Pin 18 of CN1601



**NOTE:**

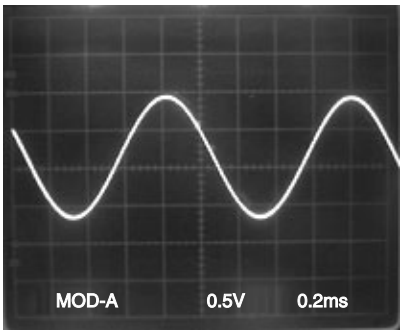
Input

VCR: COLOR BAR SIGNAL (WITH 1KHz AUDIO SIGNAL)
(WF1~WF3, WF10~WF15)

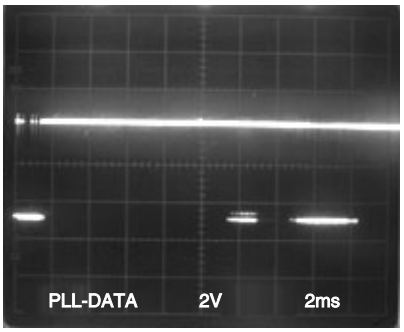
DVD: POWER ON (STOP) MODE
(WF4~WF6)

CD: 1kHz PLAY
(WF7~WF9)

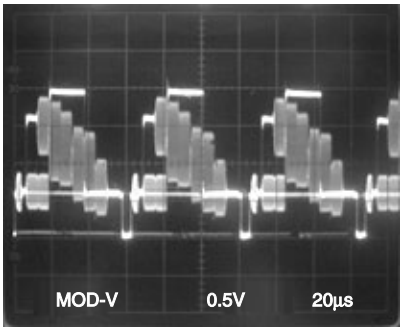
**WF10** Pin 2 of TU701



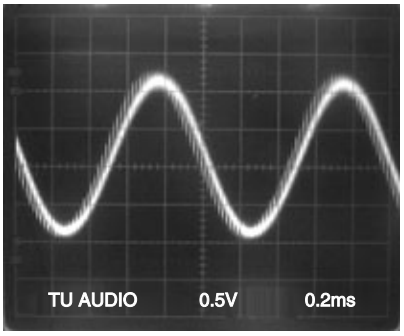

**WF13** Pin 12 of TU701



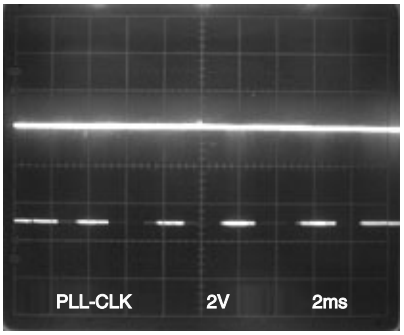

**WF11** Pin 6 of TU701



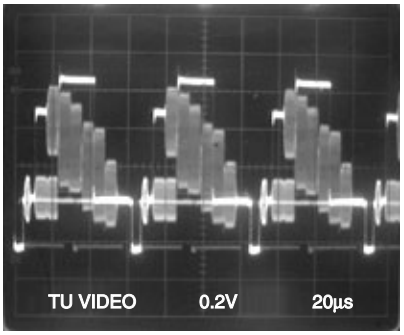

**WF14** Pin 14 of TU701



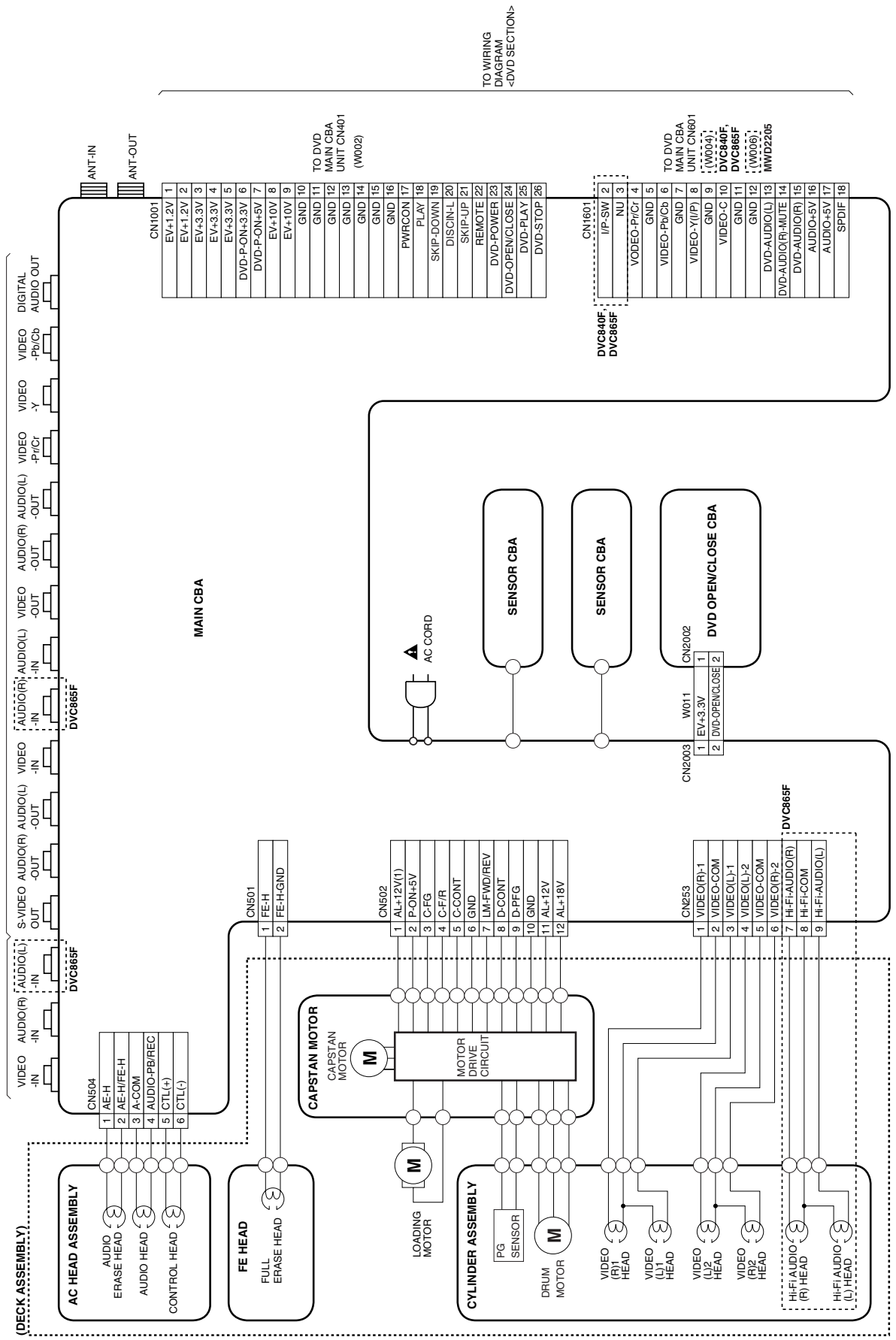

**WF12** Pin 11 of TU701



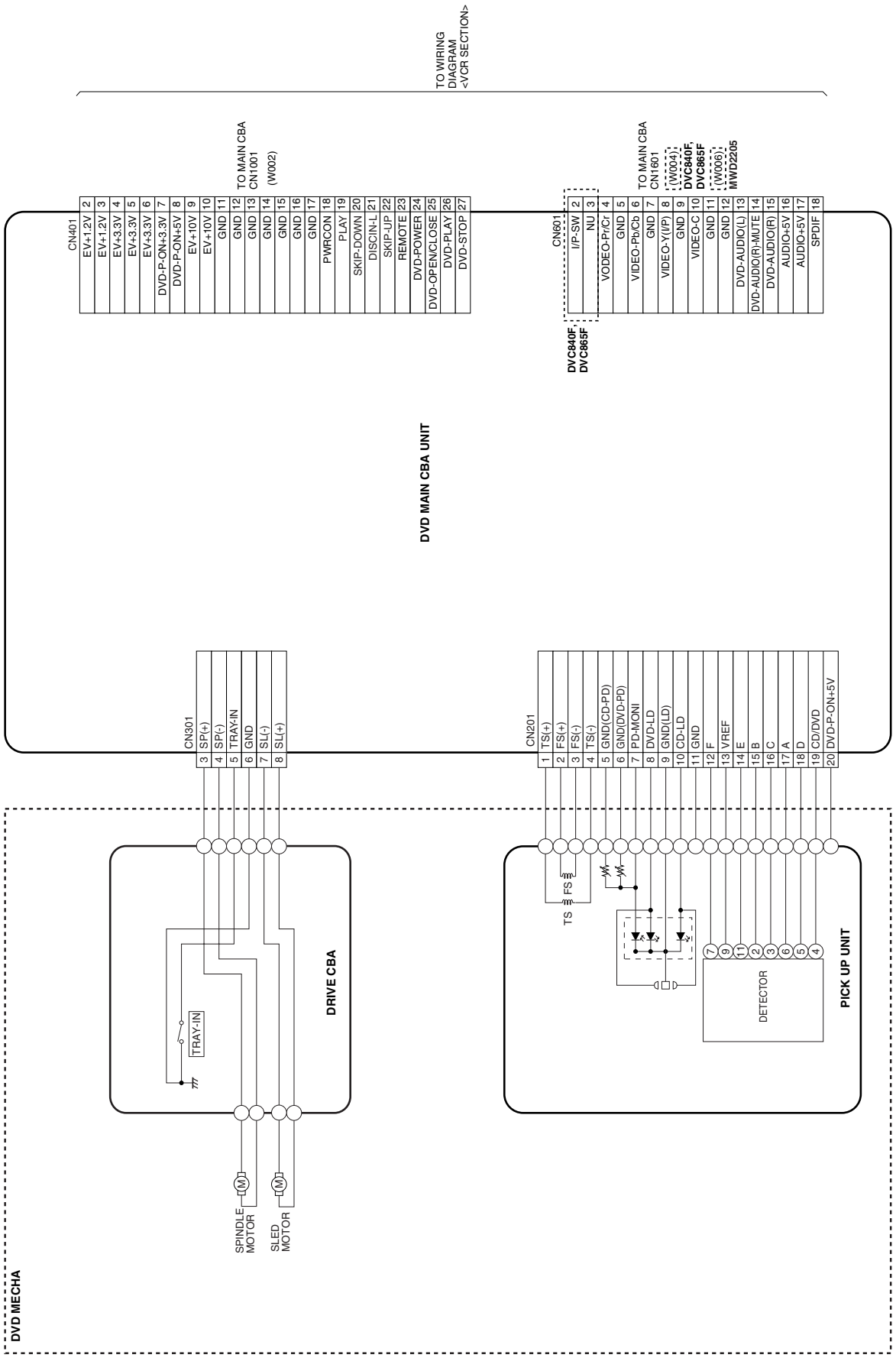

**WF15** Pin 18 of TU701



# WIRING DIAGRAM < VCR SECTION >



# WIRING DIAGRAM < DVD SECTION >



# SYSTEM CONTROL TIMING CHARTS

## < VCR Section >

### Mode SW: LD-SW

| LD-SW Position detection A/D Input voltage Limit (Calculated voltage) | Symbol |
|---|---|
| 3.76 V ~ 4.50 V (4.12 V) | EJ |
| 4.51 V ~ 5.00 V (5.00 V) | CL |
| 0.00 V ~ 0.25 V (0.00 V) | SB |
| 1.06 V ~ 1.50 V (1.21 V) | TL |
| 0.66 V ~ 1.05 V (0.91 V) | FB |
| 1.99 V ~ 2.60 V (2.17 V) | SF |
| 1.51 V ~ 1.98 V (1.80 V) | SM |
| 3.20 V ~ 3.75 V (3.40 V) | AU |
| 0.26 V ~ 0.65 V (0.44 V) | AL |
| 4.51 V ~ 5.00 V (5.00 V) | SS |
| 2.61 V ~ 3.19 V (2.97 V) | RS |

**Note:**

**Note:** EJ → RS: Loading FWD (LM-FWD / REV “H”)
RS → EJ: Loading REV (LM-FWD / REV “L”)
Stop (A) = Loading
Stop (B) = Unloading

**Note:**

| Symbol | Loading Status |
|---|---|
| EJ | Eject |
| CL | Eject ~ REW Reel |
| SB | REW Reel ~ Stop (B) |
| TL | Stop (B) ~ Brake Cancel |
| FB | Brake Cancel ~ FF / REW |
| SF | FF / REW ~ Stop (M), (FF / REW) |
| SM | Stop (M), (FF / REW) ~ Stop (A) |
| AU | Stop (A) ~ Play / REC |
| AL | Play / REC ~ Still / Slow |
| SS | Still / Slow ~ RS (REW Search) |
| RS | RS (REW Search) |

## Still/Slow Control Frame Advance Timing Chart

### 1) SP Mode

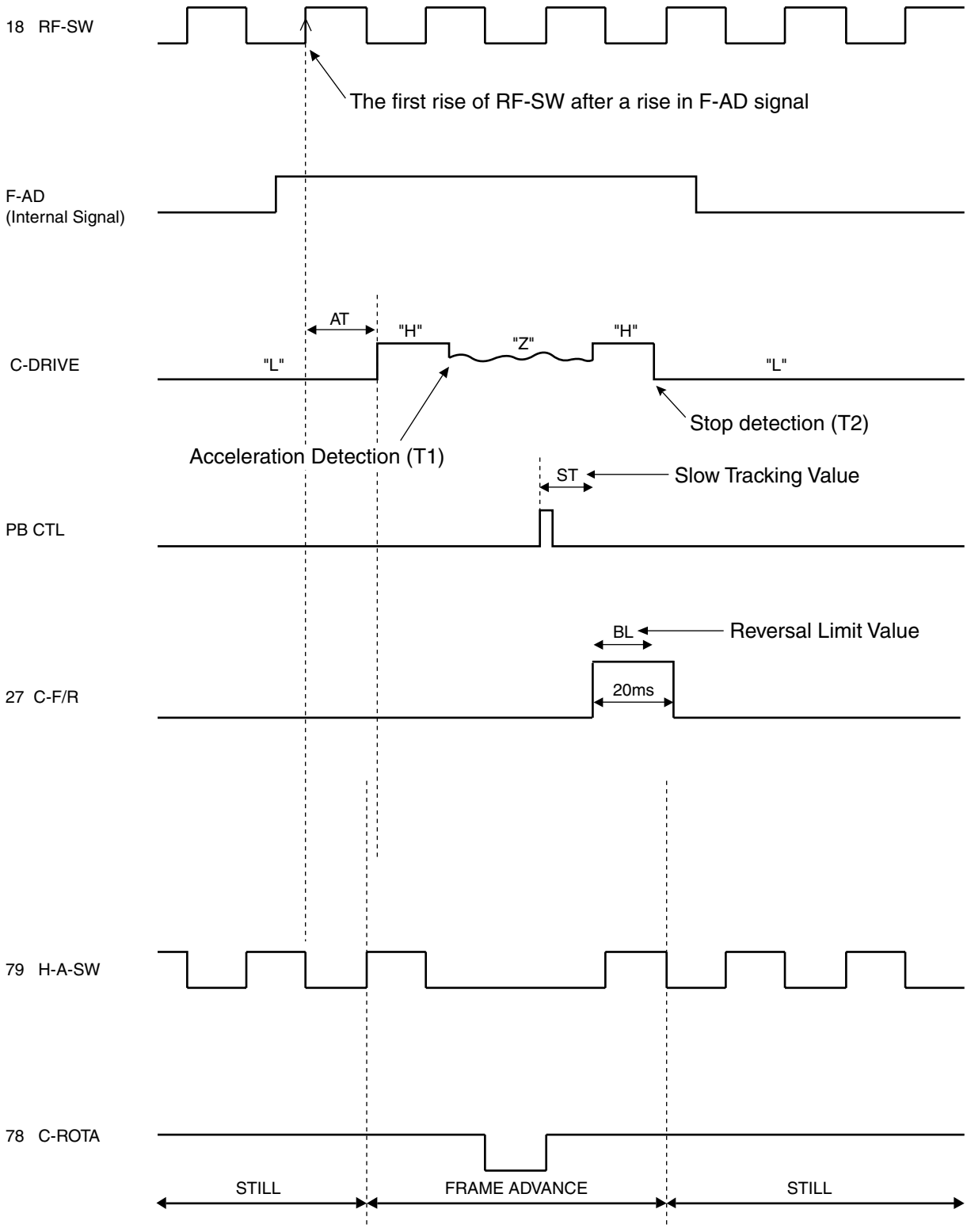



**Fig. 1**

**2) LP/SLP Mode**

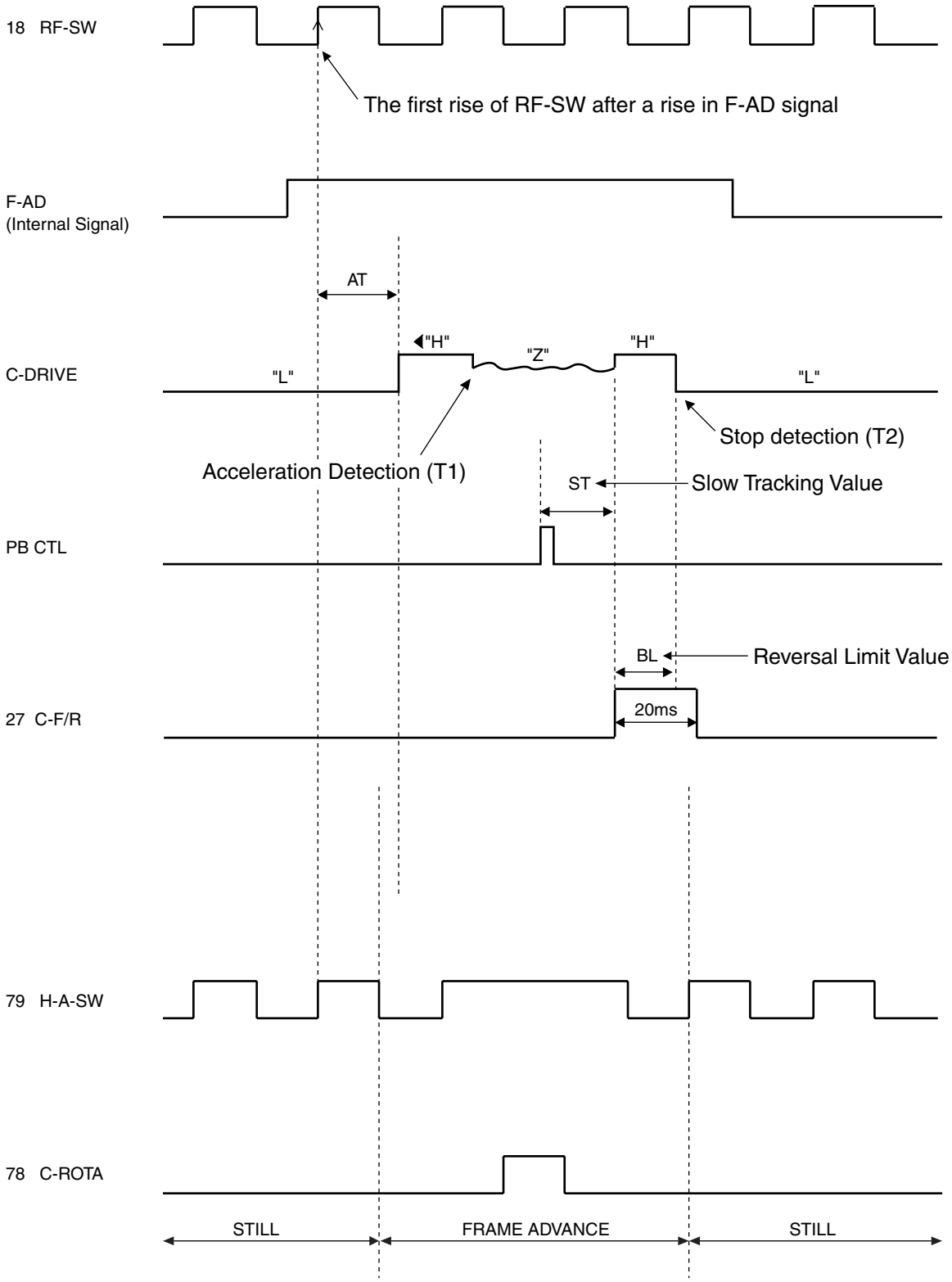



**Fig. 2**

**1. EJECT (POWER OFF) -> CASSETTE IN (POWER ON) -> STOP(B) -> STOP(A) -> PLAY -> RS -> FS -> PLAY -> STILL -> PLAY -> STOP(A)**

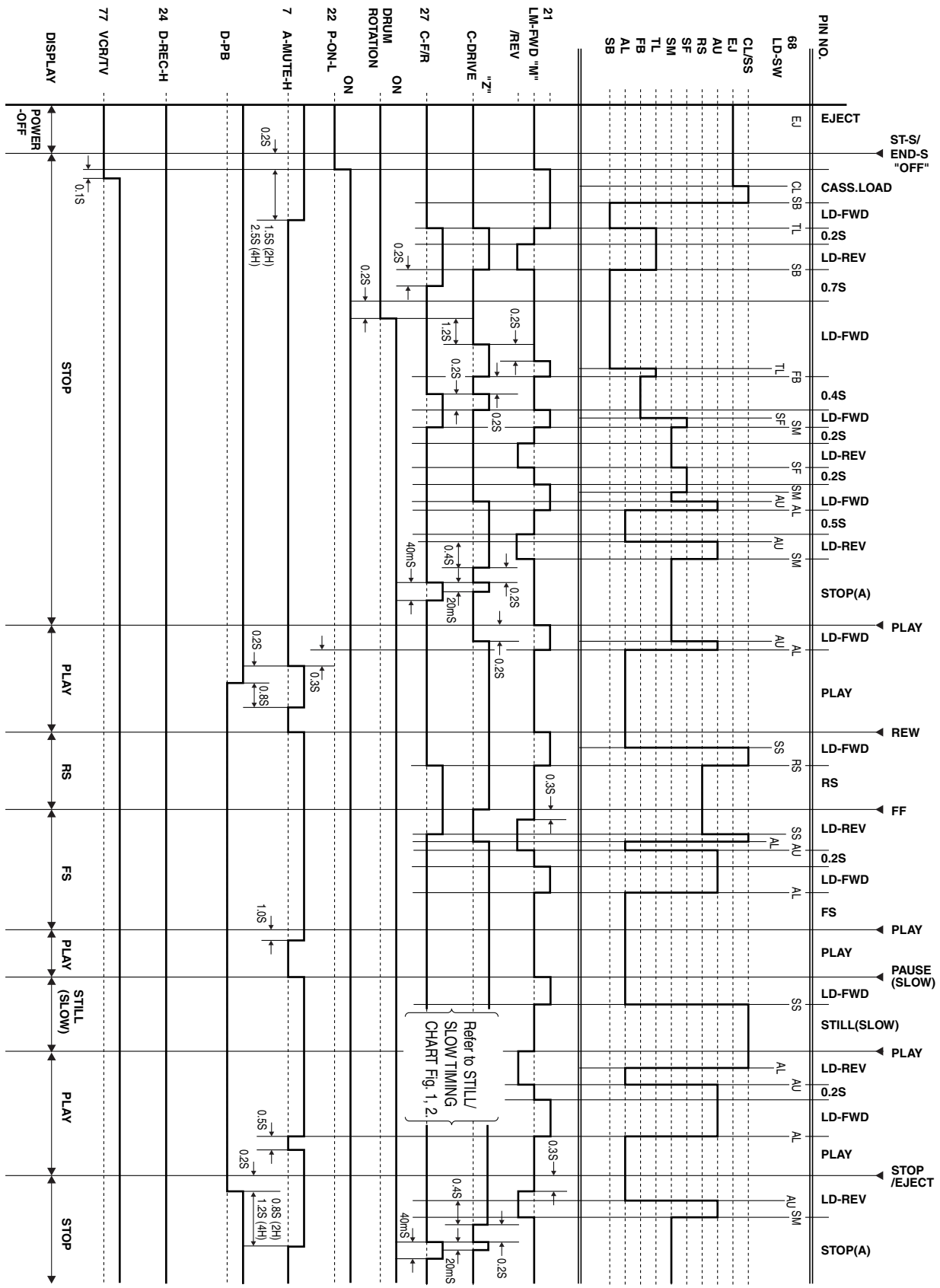



**Fig. 3**

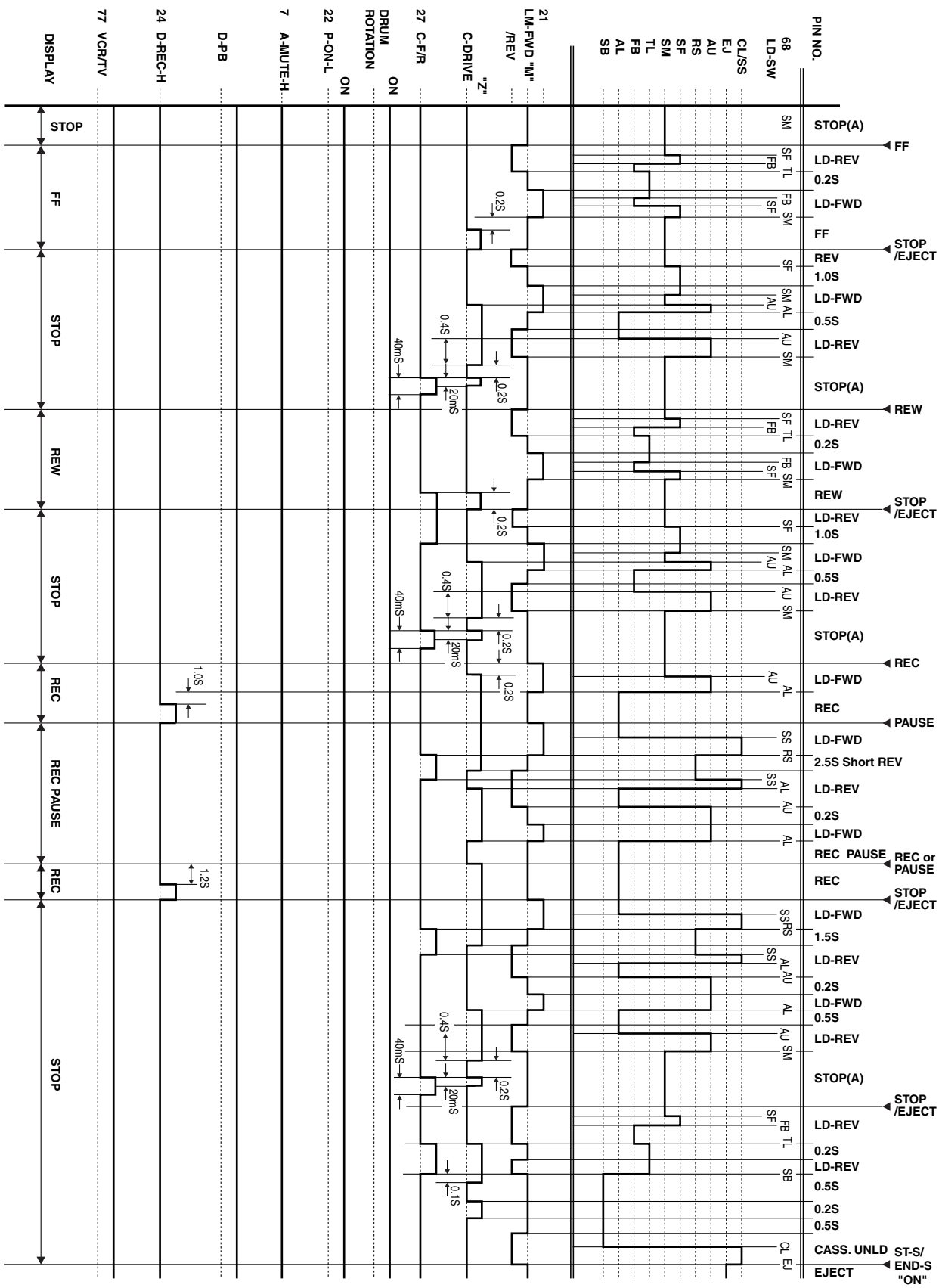
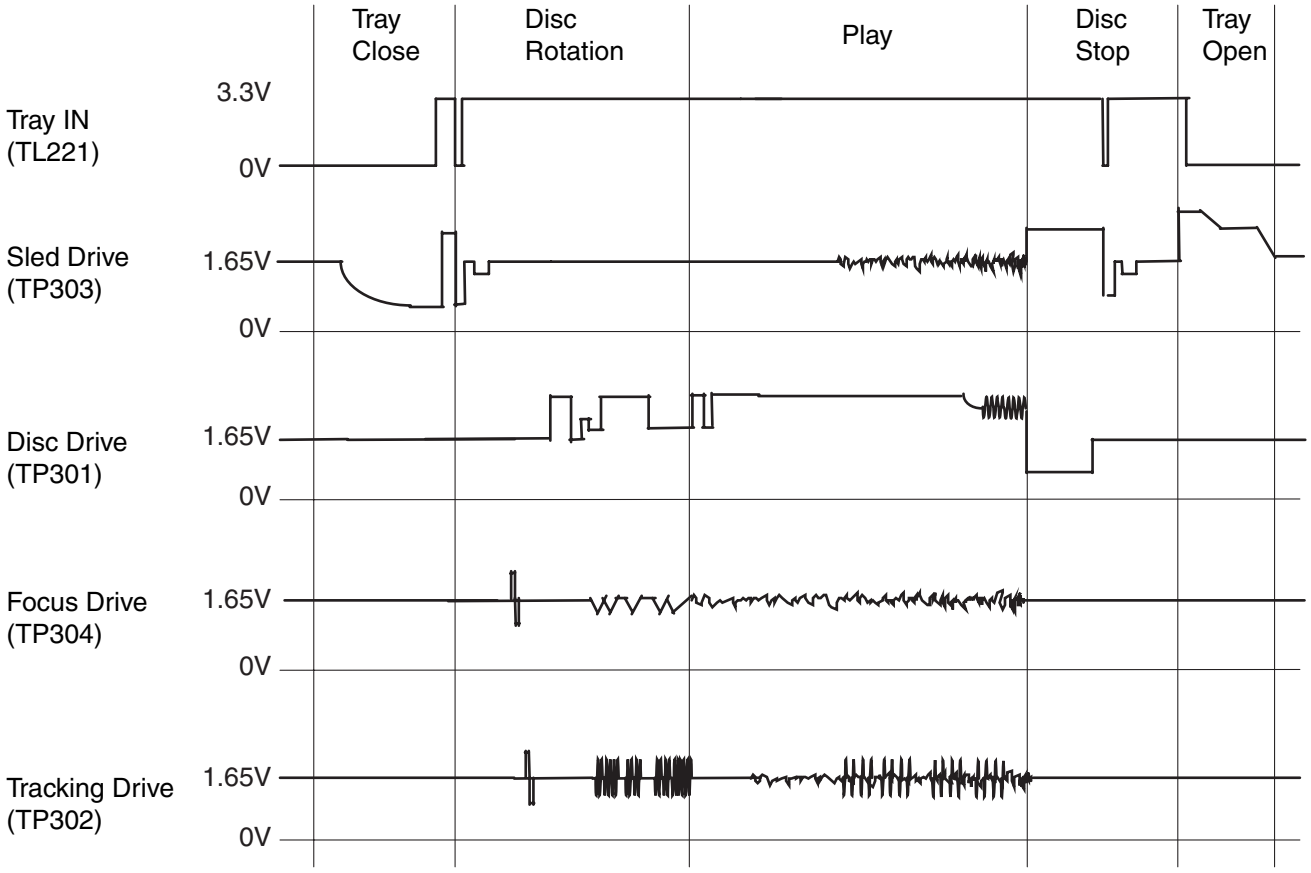

2. STOP(A) -> FF -> STOP(A) -> REW -> STOP(A) -> REC -> PAUSE -> PAUSE or REC -> STOP(A) -> EJECT
PIN NO.
68 LD-SW
CL/SS
EJ
AU
RS
SF
SM
TL
FB
AL
SB
21 LM-FWD "M" /REV
"Z" C-DRIVE
27 C-F/R
DRUM ROTATION
22 P-ON-L
7 A-MUTE-H
24 D-REC-H
D-PB
77 VCR/TV
DISPLAY
STOP
FF
STOP
REW
STOP
REC
REC PAUSE
REC
STOP
STOP(A)
FF
LD-REV
0.2S
LD-FWD
FF
STOP /EJECT
REV
1.0S
LD-FWD
0.5S
LD-REV
STOP(A)
REW
LD-REV
0.2S
LD-FWD
REW
STOP /EJECT
LD-REV
1.0S
LD-FWD
0.5S
LD-REV
STOP(A)
REC
LD-FWD
REC
PAUSE
LD-FWD
2.5S Short REV
LD-REV
0.2S
LD-FWD
REC PAUSE
REC or PAUSE
REC
STOP /EJECT
LD-FWD
1.5S
LD-REV
0.2S
LD-FWD
0.5S
LD-REV
STOP(A)
STOP /EJECT
LD-REV
0.2S
LD-REV
0.5S
0.2S
0.5S
CASS. UNLD
EJECT
ST-S/ END-S "ON"
0.2S
0.4S
40mS
20mS
1.0S
1.2S
0.1S

**Fig. 4**

## < DVD Section >

Tray Close ~ Play / Play ~ Tray Open



# IC PIN FUNCTION DESCRIPTIONS

## < VCR Section >

**Comparison Chart of Models and Marks**

| Model | Mark |
|---|---|
| DVC840F | A |
| MWD2205 | B |
| DVC865F | C |

### IC501 (SERVO/SYSTEM CONTROL/OSD)

**"H" ≥ 4.5 V, "L" ≤ 1.0 V**

| Pin No. | Mark | IN/ OUT | Signal Name | Function | Active Level |
|---|---|---|---|---|---|
| 1 | | IN | P-DOWN -L | Power Voltage Down Detector Signal | L |
| 2 | | IN | REC-SAF-SW | Recording Safety SW Detect (With Record tab = "L" / With out Record tab = "H") | H/L |
| 3 | | IN | T-REEL | Take Up Reel Rotation Signal | PULSE |
| 4 | | - | N.U. | Not Used | - |
| 5 | | IN | REMOTE-VIDEO | Remote Control Sensor | L |
| 6 | | - | N.U. | Not Used | - |
| 7 | | OUT | A-MUTE-H | Audio Mute Control Signal (Mute = "H") | H |
| 8 | | - | N.U. | Not Used | - |
| 9 | | - | N.U. | Not Used | - |
| 10 | | - | N.U. | Not Used | - |
| 11 | | IN/ OUT | DVD-PC | DVD Power Supply | - |
| 12 | | IN/ OUT | IIC-BUS-SDA | IIC BUS Control Data | H/L |
| 13 | | OUT | IIC-BUS-SCL | IIC BUS Control Clock | H/L |
| 14 | | OUT | YCA-SCL | YCA IC Control Clock | H/L |
| 15 | | OUT | YCA-SDA | YCA IC Control Data | H/L |
| 16 | | OUT | YCA-CS | YCA IC Control Chip Select | H/L |
| 17 | | - | N.U. | Not Used | - |
| 18 | | OUT | RF-SW | Video Head Switching Pulse | H/L |
| 19 | | OUT | D-V SYNC | Dummy V-sync Output | H/Hi-z |
| 20 | | IN | RESET | System Reset Signal (Reset = "L") | L |
| 21 | | OUT | LM-FWD/ REV | Loading Motor FWD/ REV Output | H/Z/L |
| 22 | | OUT | P-ON-L | Power On Signal to Low | L |
| 23 | | - | N.U. | Not Used | - |
| 24 | | OUT | D-REC-H | Delayed Record Signal | H |
| 25 | A,B | - | N.U. | Not Used | - |
| | C | OUT | HiFi-H-SW | HiFi Audio Head Switching Pulse | H/L |
| 26 | | OUT | DVD-POWER | DVD Power Control Signal | H |
| 27 | | OUT | C-F/R | Capstan Motor FWD/REV Control Signal (FWD = "L" / REV = "H") | H/L |
| 28 | | OUT | C-CONT | Capstan Motor Control Signal | PWM |
| 29 | | OUT | D-CONT | Drum Motor Control Signal | PWM |
| 30 | | - | N.U. | Not Used | - |
| 31 | | - | VDD | VDD | - |
| 32 | | OUT | OSCO | Main Clock Output 14.31818MHz | - |
| 33 | | IN | OSCI | Main Clock Input 14.31818MHz | - |
| 34 | | - | VSS | VSS | |
| 35 | | IN | XI | Sub Clock Input 32.768 MHz | - |
| 36 | | OUT | XO | Sub Clock Output 32.768 MHz | - |
| 37 | | IN | SXI | Operation Mode Selecting Input Signal | - |

| Pin No. | Mark | IN/ OUT | Signal Name | Function | Active Level |
|---|---|---|---|---|---|
| 38 | | OUT | VIDEO-OUT | Composite Video Signal Output | - |
| 39 | | - | Vss2 | Vss2 | - |
| 40 | | IN | VIDEO-IN | Composite Video Signal Input | - |
| 41 | | IN | C-SYNC | Composite Synchronized Pulse | PULSE |
| 42 | | - | VDD2 | VDD2 | - |
| 43 | | IN | AFCC | Low Path Filter Input Signal For AFC | - |
| 44 | | OUT | AFCLPF | Low Path Filter Output Signal For AFC | - |
| 45 | | - | N.U. | Not Used | - |
| 46 | | OUT | OUTPUT-SELECT | Output Select | H/L |
| 47 | | IN | D-PFG | Drum PG/FG Input Signal | PULSE |
| 48 | | - | N.U. | Not Used | - |
| 49 | | IN | C-FG | Capstan Motor Rotation Detection Pulse | PULSE |
| 50 | | - | AFG | GND | - |
| 51 | | OUT | VRO | Servo Standard Voltage Output | - |
| 52 | | IN | VRI | Servo Standard Voltage Input | - |
| 53 | | - | AVss | AVSS | - |
| 54 | | IN | CTLA | CTL Amp. AC GND | - |
| 55 | | - | AVDD | AVDD | - |
| 56 | | IN/ OUT | CTL (+) | Playback/ Record Control Signal (+) | - |
| 57 | | IN/ OUT | CTL (-) | Playback/ Record Control Signal (-) | - |
| 58 | | OUT | CTL | Amp. Output Control Signal for Test Point | - |
| 59 | A,B | - | N.U. | Not Used | - |
| | C | IN | HiFi/NOR-IN | Audio Mode Input (HiFi = “L” / Normal = “H”) | A/D |

| Pin No. | Mark | IN/ OUT | Signal Name | Function | Active Level |
|---|---|---|---|---|---|
| 60 | | IN | DVD-POW-MONITOR | DVD Power Monitor Signal (P-off = “L”, P-on = “H”) | H/L |
| 61 | A,B | - | N.U. | Not Used | - |
| | C | IN | ST/SAP-IN | Tuner Stereo/ Sap Detector Signal Input | A/D |
| 62 | | IN | END-S | Tape End Position Detect Signal | A/D |
| 63 | | IN | AFC | Automatic Frequency Control Signal | A/D |
| 64 | | IN | V-ENV | Video Envelope Comparator Signal | A/D |
| 65 | | IN | PG-DELAY | Video Head Switching Pulse Signal Adjusted Voltage | A/D |
| 66 | | IN | KEY-2 | A/D Key Data Signal 2 | A/D |
| 67 | | IN | KEY-1 | A/D Key Data Signal 1 | A/D |
| 68 | | IN | LD-SW | Deck Mode Position Detector Signal | A/D |
| 69 | | IN | ST-S | Tape Start Position Detector Signal | A/D |
| 70 | | OUT | DVD-L-IND | VCR Mode LED Signal Output | H/L |
| 71 | | OUT | DVD-H-IND | DVD Mode LED Signal Output | H/L |
| 72 | | OUT | REC-IND | REC Mode LED Signal Output | H/L |
| 73 | | - | N.U. | Not Used | - |
| 74 | | - | N.U. | Not Used | - |
| 75 | | OUT | TIMER-IND | TIMER LED Signal Output | H/L |
| 76 | | OUT | CONV-SW | RF Conv. Output Channel Switching Signal (3ch = “Hi-z”, 4ch = “L”) | Hi-z/L |

| Pin No. | Mark | IN/ OUT | Signal Name | Function | Active Level |
|---|---|---|---|---|---|
| 77 | | OUT | VCR/TV-IND | RF Conv. ON/ OFF Signal (TV = “L” / VCR = “H”) | H/L |
| 78 | | OUT | C-ROTA | Color Phase Rotary Changeover Signal | H/L |
| 79 | | OUT | H-A-SW | Video Head Amp Switching Pulse | H/L |
| 80 | | IN | H-A-COMP | Head Amp Comparator Signal | H/L |

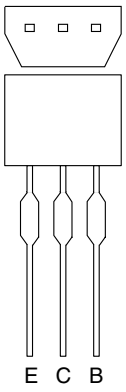
**Notes:**

Abbreviation for Active Level:

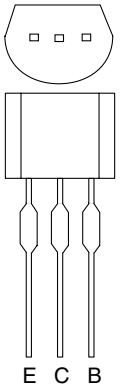
PWM ----- Pulse Wide Modulation

A/D -------- Analog - Digital Converter

# LEAD IDENTIFICATIONS

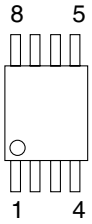



KRA103M
KRC103M
KTA1266(GR)
KTA1267(Y)
KTC3193(Y)
KTC3199(Y,BL)

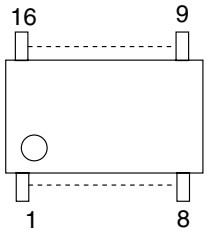



2SC1815-GR(TPE2)
KTC3198(Y)
KTC3203(Y)

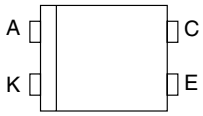
KIA4558P



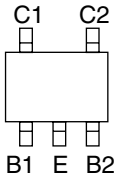

MM1637XVBE



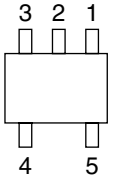

EL817A




RN1511(TE85R)

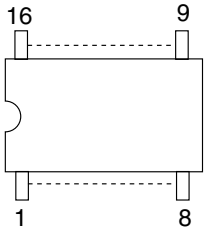



PQ1LAX95MSPQ




1: VREF
2: GND
3: VC
4: VIN
5: VOUT

CD4053BNSR

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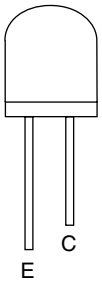


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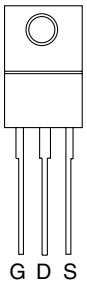
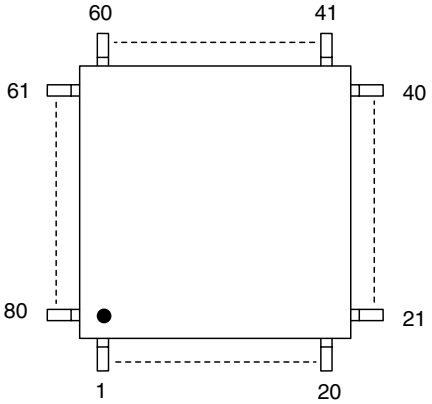


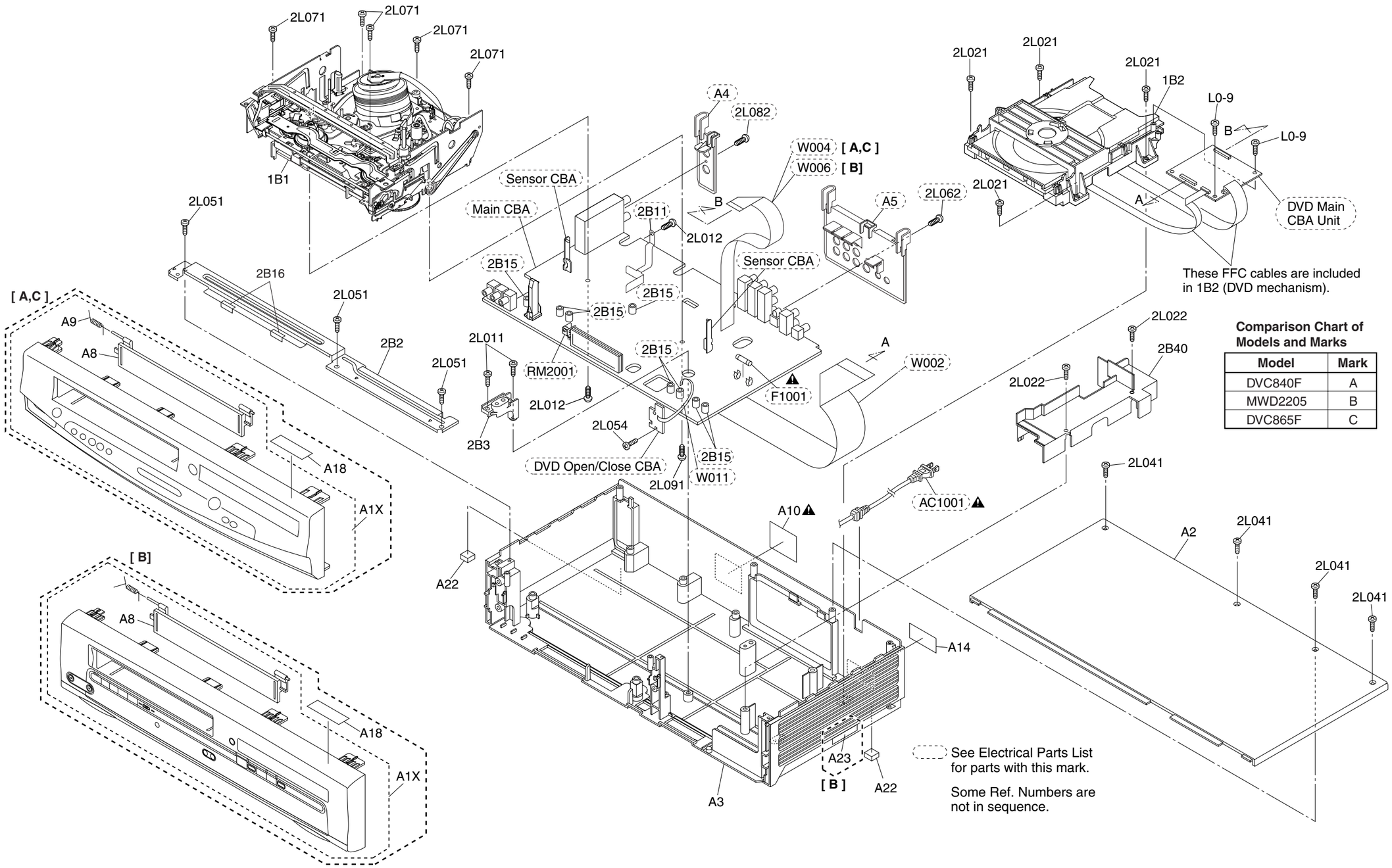

BA5888FP-E2
LA72670BM-MPB-E
MN101D08DEK




Note:
A: Anode
K: Cathode
E: Emitter
C: Collector
B: Base
R: Reference
S: Source
G: Gate
D: Drain

# EXPLODED VIEWS

## Cabinet



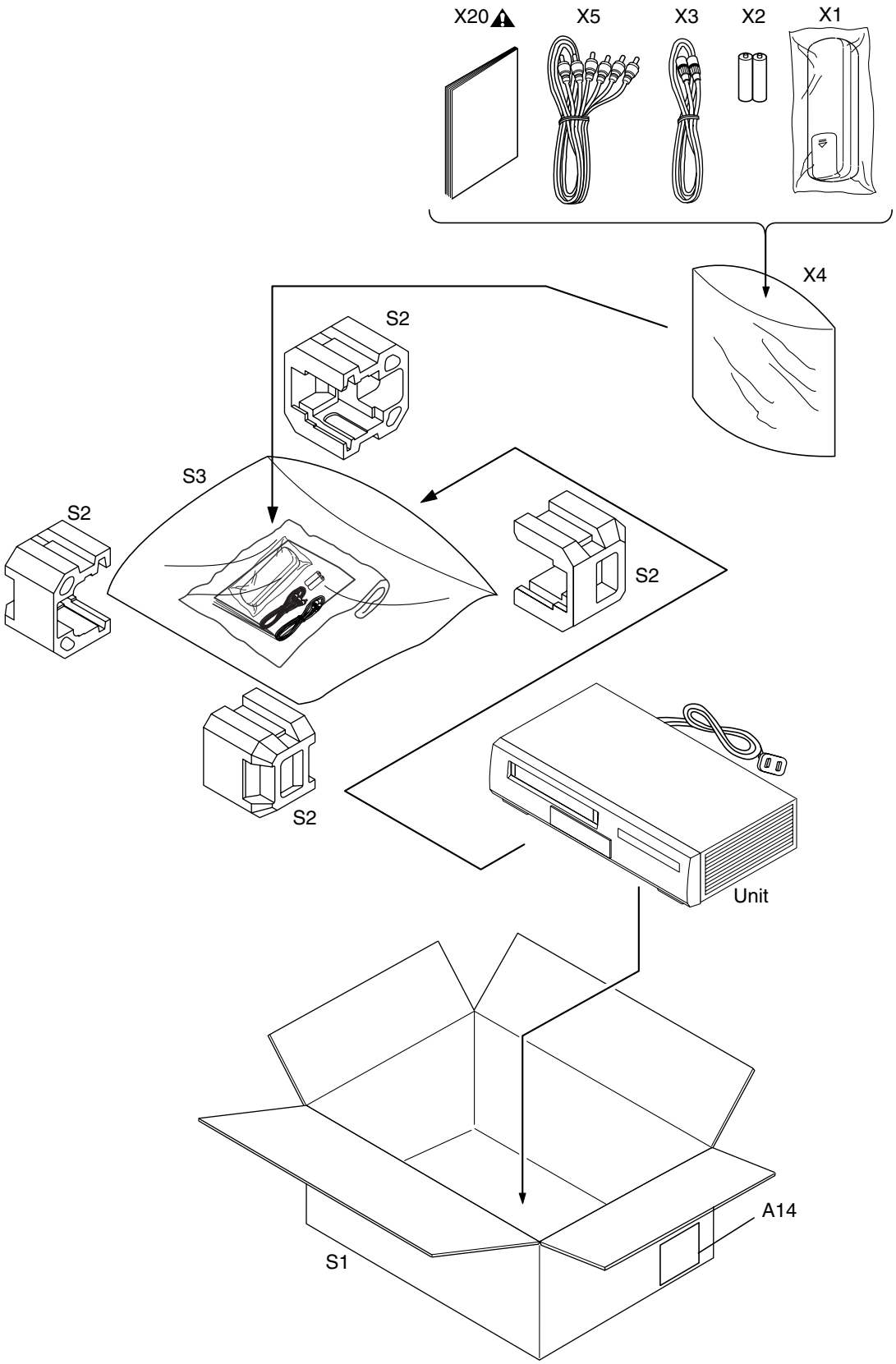

**Comparison Chart of Models and Marks**

| Model | Mark |
|---|---|
| DVC840F | A |
| MWD2205 | B |
| DVC865F | C |

See Electrical Parts List for parts with this mark.

Some Ref. Numbers are not in sequence.

## Packing



# MECHANICAL PARTS LIST

**PRODUCT SAFETY NOTE:** Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

**NOTE:** Parts that are not assigned part numbers (---------) are not available.

### Comparison Chart of Models and Marks

| Model | Mark |
|---|---|
| DVC840F | A |
| MWD2205 | B |
| DVC865F | C |

| Ref. No. | Mark | Description | Part No. |
|---|---|---|---|
| A1X | A | FRONT ASSEMBLY H9801UD | 1VM220302 |
| A1X | B | FRONTASSEMBLY H98K0UD | 1VM220318 |
| A1X | C | FRONT ASSEMBLY H9802UD | 1VM220380 |
| A2 | A,C | TOP CASE H9600UD | 0VM101340 |
| A2 | B | TOP CASE H98K0UD | 1VM320632 |
| A3 | A,C | CHASSIS H9800UD | 1VM220316 |
| A3 | B | CHASSIS H98K0UD | 1VM220337 |
| A8 | A | DOOR, CASSETTE H9601UD | 0VM416215 |
| A8 | B | DOOR,CASSETTE H98K0UD | 1VM320605 |
| A8 | C | DOOR, CASSETTE H9600UD | 0VM306647 |
| A9 | | SPRING, DOOR H7220UD U15 | 0VM408617 |
| A10⚠ | A | LABEL,RATING(U) H9801UD | ---------- |
| A10⚠ | B | LABEL,RATING(U) H98K0UD | ---------- |
| A10⚠ | C | RATING LABEL(U) H9802UD | ---------- |
| A14 | | LABEL, BAR CODE HB400UD | ---------- |
| A18 | A,C | LABEL, TELEPHONE NUMBER H5730UD(SYLVANIA) | ---------- |
| A18 | B | TELEPHONE NO. LABEL H9670UD | ---------- |
| A22 | | CHASSIS FOOT H79P9JD | 0VM412315 |
| A23 | B | LABEL, EAS L0951UB | ---------- |
| 1B1 | A,B | DECK ASSEMBLY CZD014/VM2440 | N2440FL |
| 1B1 | C | DECK ASSEMBLY CZD014/VM2460 | N2460FL |
| 1B2 | | DVD MECHA E6160(FG LESS) N79F0JVM | N79F0JVM |
| 2B2 | | TOP BRACKET H9600UD | 0VM204470 |
| 2B3 | | RODER HOLDER H9600UD | 0VM306676 |
| 2B16 | | TAPE, HIMELON H9206JD | 0VM413956 |
| 2B40 | | PARTITION PLATE H9600UD | 0VM306677 |
| 2L011 | | P-TIGHT SCREW 3X8 BIND + | GBMP3080 |
| 2L012 | | SCREW, S-TIGHT M3X6 BIND HEAD+ | GBMS3060 |
| 2L021 | | SCREW, P-TIGHT 3X12 BIND HEAD+ | GBMP3120 |
| 2L022 | | P-TIGHT SCREW 3X8 BIND + | GBMP3080 |
| 2L041 | | SCREW, P-TIGHT 3X10 BIND HEAD+ | GBEP3100 |
| 2L051 | | SCREW, P-TIGHT M3X6 BIND HEAD+ | GBMP3060 |
| 2L054 | | SCREW, P-TIGHT M3X6 BIND HEAD+ | GBMP3060 |
| 2L071 | | SCREW, P-TIGHT M3X10 WASHER HEAD+ | GCMP3100 |
| 2L091 | | SCREW, P-TIGHT M3X8 BIND HEAD+ | GBCP3080 |
| L0-9 | | P-TIGHT SCREW 3X8 BIND + | GBMP3080 |
| **PACKING** | | | |
| S1 | A | GIFT BOX,CARTON H9801UD | 1VM320622 |
| S1 | B | GIFT BOX,CARTON H98K0UD | 1VM320661 |
| S1 | C | GIFT BOX CARTON H9802UD | 1VM320693 |
| S2 | | STYROFOAM H9680UD | 0VM204474E |
| S3 | | UNIT, BAG E5500UD | 0VM411683 |
| **ACCESSORIES** | | | |
| X1 | A,C | REMOTE CONTROL UNIT DVD 0364 VCZF05DD | NB177UD |
| X1 | B | REMOTE CONTROL UNIT NB179UD | NB179UD |
| X2 | | DRY BATTERY R6P/2S | XB0M451T0001 |
| X3 | | RF CABLE 2.5C-2V | WPZ0901TM002 |
| X4 | | ACCESSORY BAG E5700UD | 0VM415576 |
| X5 | | AV CORD TSCKA-Y/RW100 | WPZ0102TM015 |
| X20⚠ | A | OWNERS MANUAL H9801UD | 1VMN20370 |
| X20⚠ | B | OWNERS MANUAL H98K0UD | 1VMN20396 |
| X20⚠ | C | OWNERS MANUAL H9802UD | 1VMN20415 |

# ELECTRICAL PARTS LIST

**PRODUCT SAFETY NOTE:** Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

**NOTES:**

1. Parts that are not assigned part numbers (---------) are not available.
2. Tolerance of Capacitors and Resistors are noted with the following symbols.

C.....±0.25% D.....±0.5% F.....±1%

G.....±2% J.....±5% K.....±10%

M.....±20% N.....±30% Z.....+80/-20%

**Comparison Chart of Models and Marks**

| Model | Mark |
|---|---|
| DVC840F | A |
| MWD2205 | B |
| DVC865F | C |

## DVD MAIN CBA UNIT

| Ref. No. | Mark | Description | Part No. |
|---|---|---|---|
| | A,C<br>B | DVD MAIN CBA UNIT<br>DVD MAIN CBA UNIT | N79FBJUP<br>N79FCJUP |

## MCV CBA

| Ref. No. | Mark | Description | Part No. |
|---|---|---|---|
| | A<br>B<br>C | MCV CBA<br>MCV CBA<br>MCV CBA<br>Consists of the following: | 1VSA10974<br>1VSA11005<br>1VSA11043 |
| | | MAIN CBA (MCV-A)<br>DVD OPEN/CLOSE CBA (MCV-C)<br>SENSOR CBA | ----------<br>----------<br>1VSA10910 |

## MAIN CBA

| Ref. No. | Mark | Description | Part No. |
|---|---|---|---|
| | | MAIN CBA (MCV-A)<br>Consists of the following: | ---------- |
| | | **CAPACITORS** | |
| C013 | | ELECTROLYTIC CAP. 10μF/50V M H7 | CE1JMASSL100 |
| C017 | | CERAMIC CAP.(AX) F Z 0.1μF/50V | CCA1JZTFZ104 |
| C018 | | ELECTROLYTIC CAP. 470μF/16V M | CE1CMASDL471 |
| C020 | | ELECTROLYTIC CAP. 1000μF/10V M | CE1AMASDL102 |
| C021 | | ELECTROLYTIC CAP. 470μF/6.3V M | CE0KMASDL471 |
| C023 | | ELECTROLYTIC CAP. 100μF/16V M | CE1CMASDL101 |
| C030 | | CERAMIC CAP.(AX) B K 0.033μF/50V | CA1J333TU011 |
| C051 | | ELECTROLYTIC CAP. 10μF/16V M H7 | CE1CMAVSL100 |
| C053 | | ELECTROLYTIC CAP. 220μF/6.3V M | CE0KMASDL221 |
| C060 | | CHIP CERAMIC CAP. B K 0.1μF/25V | CHD1EKB0B104 |
| C301 | | ELECTROLYTIC CAP. 1μF/50V M H7 | CE1JMAVSL1R0 |
| C302 | | CHIP CERAMIC CAP. CH J 390pF/50V | CHD1JJBCH391 |
| C303 | | PCB JUMPER D0.6-P5.0 | JW5.0T |
| C304 | | CHIP CERAMIC CAP. CH J 100pF/50V | CHD1JJBCH101 |
| C305 | | CHIP CERAMIC CAP. CH J 100pF/50V | CHD1JJBCH101 |
| C307 | | CHIP CERAMIC CAP. F Z 1μF/10V | CHD1AZB0F105 |
| C308 | | ELECTROLYTIC CAP. 47μF/6.3V M H7 | CE0KMAVSL470 |
| C309 | | CHIP CERAMIC CAP. F Z 0.1μF/50V | CHD1JZB0F104 |
| C310 | | ELECTROLYTIC CAP. 22μF/6.3V M H7 | CE0KMAVSL220 |
| C311 | | ELECTROLYTIC CAP. 1μF/50V M H7 | CE1JMASSL1R0 |
| C312 | | CHIP CERAMIC CAP. F Z 1μF/10V | CHD1AZB0F105 |
| C313 | | ELECTROLYTIC CAP. 1μF/50V M H7 | CE1JMASSL1R0 |
| C314 | | CHIP CERAMIC CAP. F Z 1μF/10V | CHD1AZB0F105 |
| C315 | | CHIP CERAMIC CAP. B K 0.1μF/25V | CHD1EKB0B104 |
| C316 | | CHIP CERAMIC CAP. F Z 1μF/10V | CHD1AZB0F105 |
| C317 | | CHIP CERAMIC CAP. F Z 1μF/10V | CHD1AZB0F105 |
| C318 | | ELECTROLYTIC CAP. 22μF/6.3V M H7 | CE0KMAVSL220 |
| C319 | | CHIP CERAMIC CAP. B K 0.01μF/50V | CHD1JKB0B103 |
| C320 | | CHIP CERAMIC CAP. B K 0.01μF/50V | CHD1JKB0B103 |
| C321 | C | CHIP CERAMIC CAP. B K 0.01μF/50V | CHD1JKB0B103 |
| C322 | C | CHIP CERAMIC CAP. CH J 68pF/50V | CHD1JJBCH680 |
| C324 | | CHIP CERAMIC CAP. B K 0.01μF/50V | CHD1JKB0B103 |
| C327 | | ELECTROLYTIC CAP. 47μF/6.3V M H7 | CE0KMAVSL470 |
| C328 | | ELECTROLYTIC CAP. 1μF/50V M H7 | CE1JMAVSL1R0 |
| C329 | | CHIP CERAMIC CAP. B K 0.01μF/50V | CHD1JKB0B103 |
| C330 | | ELECTROLYTIC CAP. 1μF/50V M H7 | CE1JMAVSL1R0 |
| C331 | | CHIP CERAMIC CAP. B K 0.01μF/50V | CHD1JKB0B103 |
| C332 | | ELECTROLYTIC CAP. 1μF/50V M H7 | CE1JMAVSL1R0 |
| C333 | | CHIP CERAMIC CAP. F Z 0.1μF/50V | CHD1JZB0F104 |
| C336 | | CHIP CERAMIC CAP. B K 0.01μF/50V | CHD1JKB0B103 |
| C339 | | CHIP CERAMIC CAP. B K 0.047μF/50V | CHD1JKB0B473 |
| C340 | | CHIP CERAMIC CAP. B K 0.1μF/25V | CHD1EKB0B104 |
| C341 | | CHIP CERAMIC CAP. B K 0.047μF/50V | CHD1JKB0B473 |
| C342 | | CHIP CERAMIC CAP. F Z 0.1μF/50V | CHD1JZB0F104 |
| C343 | | ELECTROLYTIC CAP. 47μF/6.3V M H7 | CE0KMAVSL470 |
| C346 | | CHIP CERAMIC CAP. F Z 1μF/10V | CHD1AZB0F105 |
| C391 | | ELECTROLYTIC CAP. 100μF/10V M H7 | CE1AMAVSL101 |
| C392 | | ELECTROLYTIC CAP. 470μF/6.3V M | CE0KMASDL471 |
| C401 | | CHIP CERAMIC CAP. F Z 0.1μF/50V | CHD1JZB0F104 |
| C402 | A,B | CHIP CERAMIC CAP. F Z 0.1μF/50V | CHD1JZB0F104 |
| C403 | A,B | CHIP CERAMIC CAP. F Z 0.1μF/50V | CHD1JZB0F104 |
| C404 | | CHIP CERAMIC CAP. B K 0.01μF/50V | CHD1JKB0B103 |
| C405 | | ELECTROLYTIC CAP. 22μF/6.3V M H7 | CE0KMAVSL220 |
| C406 | | ELECTROLYTIC CAP. 33μF/6.3V M H7 | CE0KMAVSL330 |
| C407 | | CHIP CERAMIC CAP. B K 0.01μF/50V | CHD1JKB0B103 |
| C408 | | CHIP CERAMIC CAP. B K 0.012μF/50V | CHD1JKB0B123 |
| C409 | | ELECTROLYTIC CAP. 10μF/16V M H7 | CE1CMAVSL100 |
| C410 | | CHIP CERAMIC CAP. B K 2700pF/50V | CHD1JKB0B272 |
| C411 | | CHIP CERAMIC CAP. B K 1000pF/50V | CHD1JKB0B102 |
| C412 | | ELECTROLYTIC CAP. 4.7μF/25V M H7 | CE1EMAVSL4R7 |
| C413 | | CHIP CERAMIC CAP. B K 6800pF/50V | CHD1JKB0B682 |
| C414 | | CHIP CERAMIC CAP. B K 1000pF/50V | CHD1JKB0B102 |
| C422 | | ELECTROLYTIC CAP. 47μF/6.3V M H7 | CE0KMAVSL470 |
| C423 | | ELECTROLYTIC CAP. 220μF/6.3V M H7 | CE0KMAVSL221 |
| C424 | | CERAMIC CAP. B K 470pF/100V | CCD2AKP0B471 |
| C425 | | FILM CAP.(P) 0.018μF/100V J | CA2A183MS029 |
| C440 | C | ELECTROLYTIC CAP. 0.1μF/50V M H7 | CE1JMAVSLR10 |
| C441 | C | ELECTROLYTIC CAP. 0.1μF/50V M H7 | CE1JMAVSLR10 |
| C448 | C | ELECTROLYTIC CAP. 4.7μF/50V M H7 | CE1JMAVSL4R7 |
| C449 | C | ELECTROLYTIC CAP. 4.7μF/50V M H7 | CE1JMAVSL4R7 |
| C451 | C | ELECTROLYTIC CAP. 47μF/16V M H7 | CE1CMAVSL470 |
| C452 | C | ELECTROLYTIC CAP. 1μF/50V M H7 | CE1JMAVSL1R0 |
| C453 | C | ELECTROLYTIC CAP. 10μF/16V M H7 | CE1CMAVSL100 |
| C454 | C | ELECTROLYTIC CAP. 1μF/50V M H7 | CE1JMAVSL1R0 |

| Ref. No. | Mark | Description | Part No. |
|---|---|---|---|
| C455 | C | ELECTROLYTIC CAP. 22μF/6.3V M H7 | CE0KMAVSL220 |
| C456 | C | ELECTROLYTIC CAP. 10μF/16V M H7 | CE1CMAVSL100 |
| C457 | C | ELECTROLYTIC CAP. 4.7μF/25V M H7 | CE1EMAVSL4R7 |
| C458 | C | CHIP CERAMIC CAP. B K 0.01μF/50V | CHD1JKB0B103 |
| C459 | C | ELECTROLYTIC CAP. 22μF/6.3V M H7 | CE0KMAVSL220 |
| C460 | C | CHIP CERAMIC CAP. B K 4700pF/50V | CHD1JKB0B472 |
| C461 | C | CHIP CERAMIC CAP. B K 0.01μF/50V | CHD1JKB0B103 |
| C462 | C | CHIP CERAMIC CAP. B K 0.01μF/50V | CHD1JKB0B103 |
| C463 | C | CHIP CERAMIC CAP. B K 0.1μF/25V | CHD1EKB0B104 |
| C465 | C | ELECTROLYTIC CAP. 4.7μF/25V M H7 | CE1EMAVSL4R7 |
| C466 | C | ELECTROLYTIC CAP. 220μF/6.3V M H7 | CE0KMAVSL221 |
| C467 | C | CHIP CERAMIC CAP. B K 0.022μF/50V | CHD1JKB0B223 |
| C469 | C | ELECTROLYTIC CAP. 10μF/16V M H7 | CE1CMAVSL100 |
| C470 | C | CERAMIC CAP.(AX) F Z 0.1μF/50V | CCA1JZTFZ104 |
| C471 | C | ELECTROLYTIC CAP. 22μF/6.3V M H7 | CE0KMAVSL220 |
| C472 | C | CHIP CERAMIC CAP. B K 4700pF/50V | CHD1JKB0B472 |
| C473 | C | CHIP CERAMIC CAP. B K 0.01μF/50V | CHD1JKB0B103 |
| C474 | C | ELECTROLYTIC CAP. 4.7μF/25V M H7 | CE1EMAVSL4R7 |
| C475 | C | ELECTROLYTIC CAP. 10μF/16V M H7 | CE1CMAVSL100 |
| C476 | C | ELECTROLYTIC CAP. 1μF/50V M H7 | CE1JMAVSL1R0 |
| C477 | C | ELECTROLYTIC CAP. 2.2μF/50V M H7 | CE1JMAVSL2R2 |
| C478 | C | ELECTROLYTIC CAP. 1μF/50V M H7 | CE1JMAVSL1R0 |
| C479 | C | CHIP CERAMIC CAP. B K 0.022μF/50V | CHD1JKB0B223 |
| C480 | C | ELECTROLYTIC CAP. 1μF/50V M H7 | CE1JMAVSL1R0 |
| C481 | C | ELECTROLYTIC CAP. 1μF/50V M H7 | CE1JMAVSL1R0 |
| C483 | C | CHIP CERAMIC CAP. F Z 0.1μF/50V | CHD1JZB0F104 |
| C484 | C | ELECTROLYTIC CAP. 2.2μF/50V M H7 | CE1JMAVSL2R2 |
| C485 | C | ELECTROLYTIC CAP. 4.7μF/25V M H7 | CE1EMAVSL4R7 |
| C486 | C | ELECTROLYTIC CAP. 1μF/50V M H7 | CE1JMAVSL1R0 |
| C487 | C | ELECTROLYTIC CAP. 4.7μF/25V M H7 | CE1EMAVSL4R7 |
| C488 | C | CHIP CERAMIC CAP. F Z 1μF/10V | CHD1AZB0F105 |
| C489 | C | ELECTROLYTIC CAP. 1μF/50V M H7 | CE1JMAVSL1R0 |
| C491 | C | ELECTROLYTIC CAP. 4.7μF/25V M H7 | CE1EMAVSL4R7 |
| C492 | C | ELECTROLYTIC CAP. 22μF/16V M H7 | CE1CMAVSL220 |
| C493 | C | ELECTROLYTIC CAP. 4.7μF/25V M H7 | CE1EMAVSL4R7 |
| C494 | C | ELECTROLYTIC CAP. 22μF/16V M H7 | CE1CMAVSL220 |
| C495 | C | CHIP CERAMIC CAP. B K 0.01μF/50V | CHD1JKB0B103 |
| C496 | C | ELECTROLYTIC CAP. 4.7μF/25V M H7 | CE1EMAVSL4R7 |
| C498 | C | ELECTROLYTIC CAP. 4.7μF/25V M H7 | CE1EMAVSL4R7 |
| C499 | C | ELECTROLYTIC CAP. 4.7μF/25V M H7 | CE1EMAVSL4R7 |
| C502 | | ELECTROLYTIC CAP. 220μF/6.3V M H7 | CE0KMAVSL221 |
| C505 | | ELECTROLYTIC CAP. 22μF/10V M H7 | CE1AMAVSL220 |
| C507 | | ELECTROLYTIC CAP. 1μF/50V M H7 | CE1JMAVSL1R0 |
| C508 | | CHIP CERAMIC CAP. B K 0.033μF/50V | CHD1JKB0B333 |
| C509 | | ELECTROLYTIC CAP. 220μF/6.3V M H7 | CE0KMAVSL221 |
| C513 | | CHIP CERAMIC CAP. CH D 10pF/50V | CHD1JDBCH100 |
| C514 | | CHIP CERAMIC CAP. CH J 22pF/50V | CHD1JJBCH220 |
| C515 | | CHIP CERAMIC CAP. CH J 18pF/50V | CHD1JJBCH180 |
| C521 | | ELECTROLYTIC CAP. 47μF/25V M H7 | CE1EMAVSL470 |
| C522 | | CHIP CERAMIC CAP. B K 4700pF/50V | CHD1JKB0B472 |
| C523 | | CHIP CERAMIC CAP. CH J 100pF/50V | CHD1JJBCH101 |
| C525 | | CHIP CERAMIC CAP. B K 4700pF/50V | CHD1JKB0B472 |
| C527 | | CHIP CERAMIC CAP. B K 0.047μF/50V | CHD1JKB0B473 |
| C529 | | CHIP CERAMIC CAP. B K 0.022μF/50V | CHD1JKB0B223 |
| C530 | | ELECTROLYTIC CAP. 1μF/50V M H7 | CE1JMAVSL1R0 |
| C531 | | ELECTROLYTIC CAP. 10μF/16V M H7 | CE1CMAVSL100 |
| C532 | | ELECTROLYTIC CAP. 10μF/16V M H7 | CE1CMAVSL100 |
| C533 | | ELECTROLYTIC CAP. 47μF/6.3V M H7 | CE0KMAVSL470 |
| C534 | | CHIP CERAMIC CAP. B K 0.1μF/25V | CHD1EKB0B104 |
| C535 | | ELECTROLYTIC CAP. 22μF/10V M H7 | CE1AMAVSL220 |
| C536 | | CHIP CERAMIC CAP. B K 1000pF/50V | CHD1JKB0B102 |
| C537 | | CHIP CERAMIC CAP. B K 1000pF/50V | CHD1JKB0B102 |
| C540 | | CHIP CERAMIC CAP. B K 0.01μF/50V | CHD1JKB0B103 |

| Ref. No. | Mark | Description | Part No. |
|---|---|---|---|
| C541 | | CHIP CERAMIC CAP. F Z 0.1μF/50V | CHD1JZB0F104 |
| C544 | | ELECTROLYTIC CAP. 100μF/6.3V H7 | CE0KMAVSL101 |
| C560 | A,B | CHIP CERAMIC CAP. CH J 100pF/50V | CHD1JJBCH101 |
| C701 | C | ELECTROLYTIC CAP. 0.47μF/50V M | CE1JMASDLR47 |
| C703 | | ELECTROLYTIC CAP. 100μF/6.3V H7 | CE0KMAVSL101 |
| C704 | | CHIP CERAMIC CAP. F Z 0.1μF/50V | CHD1JZB0F104 |
| C707 | A,B | FILM CAP.(P) 0.039μF/50V J | CA1J393MS029 |
| C708 | | ELECTROLYTIC CAP. 0.22μF/50V M | CE1JMASDLR22 |
| C709 | | ELECTROLYTIC CAP. 1μF/50V M | CE1JMASDL1R0 |
| C712 | A,B | ELECTROLYTIC CAP. 4.7μF/50V M | CE1JMASDL4R7 |
| C751 | | CHIP CERAMIC CAP. B K 2200pF/50V | CHD1JKB0B222 |
| C752 | | CHIP CERAMIC CAP. B K 2200pF/50V | CHD1JKB0B222 |
| C760 | A,C | CHIP CERAMIC CAP. CH J 47pF/50V | CHD1JJBCH470 |
| C761 | B | CHIP CERAMIC CAP. CH J 47pF/50V | CHD1JJBCH470 |
| C762 | | PCB JUMPER D0.6-P5.0 | JW5.0T |
| C766 | | CHIP CERAMIC CAP. B K 0.01μF/50V | CHD1JKB0B103 |
| C772 | | ELECTROLYTIC CAP. 4.7μF/50V M H7 | CE1JMASSL4R7 |
| C773 | | ELECTROLYTIC CAP. 4.7μF/50V M H7 | CE1JMASSL4R7 |
| C774 | | ELECTROLYTIC CAP. 47μF/25V M H7 | CE1EMAVSL470 |
| C777 | | PCB JUMPER D0.6-P5.0 | JW5.0T |
| C780 | A,B | CHIP CERAMIC CAP. B K 0.1μF/25V | CHD1EKB0B104 |
| C781 | A,B | CHIP CERAMIC CAP. B K 0.1μF/25V | CHD1EKB0B104 |
| C1001⚠ | | METALLIZED FILM CAP. 0.047μF/250V M | CT2E473MS037 |
| C1002 | | ELECTROLYTIC CAP. 22μF/50V M | CE1JMASDL220 |
| C1003 | | CERAMIC CAP. B K 0.01μF/500V | CCD2JKP0B103 |
| C1004 | | ELECTROLYTIC CAP. 220μF/200V M | CA2D221S6008 |
| C1005 | | CERAMIC CAP. B K 120pF/500V | CCD2JKP0B121 |
| C1006⚠ | | SAFETY CAP. 3300pF/250V | CCG2EMA0F332 |
| C1007 | | ELECTROLYTIC CAP. 1000μF/6.3V M | CE0KMASDL102 |
| C1008 | | CERAMIC CAP. B K 120pF/500V | CCD2JKP0B121 |
| C1013 | | CERAMIC CAP.(AX) X K 3300pF/16V | CCA1CKT0X332 |
| C1014 | | ELECTROLYTIC CAP. 470μF/6.3V M | CE0KMASDL471 |
| C1015 | | ELECTROLYTIC CAP. 220μF/6.3V M H7 | CE0KMAVSL221 |
| C1023 | | CERAMIC CAP. B K 470pF/100V | CCD2AKP0B471 |
| C1029 | | CERAMIC CAP.(AX) X K 5600pF/16V | CCA1CKT0X562 |
| C1030 | | CHIP CERAMIC CAP. B K 0.33μF/10V | CHD1AKB0B334 |
| C1031 | | CHIP CERAMIC CAP. B K 0.33μF/10V | CHD1AKB0B334 |
| C1032 | | ELECTROLYTIC CAP. 10μF/16V M H7 | CE1CMAVSL100 |
| C1033 | | CERAMIC CAP. YV Z 0.022μF/50V | CCD1JZSYV223 |
| C1038 | | ELECTROLYTIC CAP. 470μF/6.3V M | CE0KMASDL471 |
| C1039 | | CHIP CERAMIC CAP. B K 0.33μF/10V | CHD1AKB0B334 |
| C1040 | | ELECTROLYTIC CAP. 100μF/6.3V M | CE0KMASDL101 |
| C1042 | | ELECTROLYTIC CAP. 100μF/6.3V M H7 | CE0KMASSL101 |
| C1051 | | CHIP CERAMIC CAP. B K 0.33μF/10V | CHD1AKB0B334 |
| C1070 | | CHIP CERAMIC CAP. B K 0.01μF/50V | CHD1JKB0B103 |
| C1201 | | ELECTROLYTIC CAP. 10μF/16V M H7 | CE1CMAVSL100 |
| C1202 | | ELECTROLYTIC CAP. 10μF/16V M H7 | CE1CMASSL100 |
| C1205 | | CHIP CERAMIC CAP. CH J 220pF/50V | CHD1JJBCH221 |
| C1206 | | CHIP CERAMIC CAP. CH J 220pF/50V | CHD1JJBCH221 |
| C1207 | | CHIP CERAMIC CAP. CH J 47pF/50V | CHD1JJBCH470 |
| C1208 | | CHIP CERAMIC CAP. CH J 47pF/50V | CHD1JJBCH470 |
| C1221 | | ELECTROLYTIC CAP. 10μF/16V M H7 | CE1CMASSL100 |
| C1222 | | ELECTROLYTIC CAP. 10μF/16V M H7 | CE1CMASSL100 |
| C1223 | | CHIP CERAMIC CAP. B K 1000pF/50V | CHD1JKB0B102 |
| C1224 | | CHIP CERAMIC CAP. B K 1000pF/50V | CHD1JKB0B102 |
| C1245 | | CHIP CERAMIC CAP. F Z 0.1μF/50V | CHD1JZB0F104 |
| C1246 | | CHIP CERAMIC CAP. F Z 0.1μF/50V | CHD1JZB0F104 |
| C1247 | | ELECTROLYTIC CAP. 470μF/6.3V M | CE0KMASDL471 |
| C1249 | | ELECTROLYTIC CAP. 47μF/16V M H7 | CE1CMAVSL470 |
| C1351 | | CHIP CERAMIC CAP. B K 0.1μF/25V | CHD1EKB0B104 |
| C1352 | | ELECTROLYTIC CAP. 47μF/6.3V M H7 | CE0KMAVSL470 |
| C1354 | | CHIP CERAMIC CAP. CH J 100pF/50V | CHD1JJBCH101 |
| C1355 | | CHIP RES.(1608) 1/10W 0 Ω | RRXAZB5Z0000 |

| Ref. No. | Mark | Description | Part No. |
|---|---|---|---|
| C1394 | | ELECTROLYTIC CAP. 47μF/6.3V M H7 | CE0KMASSL470 |
| C1395 | | ELECTROLYTIC CAP. 470μF/6.3V M | CE0KMASDL471 |
| C1421 | | CHIP CERAMIC CAP. B K 0.01μF/50V | CHD1JKB0B103 |
| C1422 | | CHIP CERAMIC CAP. B K 0.1μF/25V | CHD1EKB0B104 |
| C1441 | | CHIP CERAMIC CAP. B K 0.33μF/10V | CHD1AKB0B334 |
| C1442 | | ELECTROLYTIC CAP. 1000μF/6.3V M | CE0KMASDL102 |
| C1461 | | ELECTROLYTIC CAP. 1μF/50V M H7 | CE1JMAVSL1R0 |
| C1462 | | ELECTROLYTIC CAP. 220μF/6.3V M | CE0KMASDL221 |
| C1481 | | ELECTROLYTIC CAP. 1μF/50V M H7 | CE1JMAVSL1R0 |
| C1482 | | ELECTROLYTIC CAP. 220μF/6.3V M | CE0KMASDL221 |
| C1524 | | ELECTROLYTIC CAP. 100μF/6.3V H7 | CE0KMAVSL101 |
| C1525 | | CERAMIC CAP.(AX) F Z 0.1μF/50V | CCA1JZTFZ104 |
| C1531 | | CHIP CERAMIC CAP. B K 0.01μF/50V | CHD1JKB0B103 |
| C1532 | | ELECTROLYTIC CAP. 22μF/6.3V M H7 | CE0KMAVSL220 |
| C2002 | | CHIP CERAMIC CAP. B K 1000pF/50V | CHD1JKB0B102 |
| C2004 | | ELECTROLYTIC CAP. 100μF/6.3V H7 | CE0KMAVSL101 |
| C2012 | | CHIP CERAMIC CAP. F Z 0.1μF/50V | CHD1JZB0F104 |
| **DIODES** | | | |
| D013 | | RECTIFIER DIODE BA158 | NDQZ000BA158 |
| D015 | | SCHOTTKY BARRIER DIODE SB370 | NDQZ000SB370 |
| D016 | | SCHOTTKY BARRIER DIODE SB240-B/P | NDWZ000SB240 |
| D019 | | PCB JUMPER D0.6-P10.0 | JW10.0T |
| D030 | | RECTIFIER DIODE BA158 | NDQZ000BA158 |
| D031 | | ZENER DIODE DZ-16BSBT265 | NDTB00DZ16BS |
| D040 | | ZENER DIODE DZ-6.8BSBT265 | NDTB0DZ6R8BS |
| D052 | | ZENER DIODE DZ-10BSBT265 | NDTB00DZ10BS |
| D080 | | RECTIFIER DIODE 1N4005 | NDQZ001N4005 |
| D082 | | RECTIFIER DIODE 1N4005 | NDQZ001N4005 |
| D083 | | ZENER DIODE DZ-6.2BSBT265 | NDTB0DZ6R2BS |
| D100 | | SWITCHING DIODE 1N4148M | NDTZ01N4148M |
| D101 | | SWITCHING DIODE 1N4148M | NDTZ01N4148M |
| D501 | | SWITCHING DIODE 1N4148M | NDTZ01N4148M |
| D504 | | ZENER DIODE DZ-18BSBT265 | NDTB00DZ18BS |
| D510 | C | SWITCHING DIODE 1N4148M | NDTZ01N4148M |
| D555 | | LED MIE-534A2 | NPZZM1E534A2 |
| D564 | | LED(RED) 204HD/E | NPQZ00204HDE |
| D565 | | LED(RED) 204HD/E | NPQZ00204HDE |
| D566 | | LED(GREEN) 204-10GD/S957 | NPQZ10GDS957 |
| D567 | | LED(GREEN) 204-10GD/S957 | NPQZ10GDS957 |
| D571 | | LED(RED) 204HD/E | NPQZ00204HDE |
| D701 | | ZENER DIODE DZ-33BSDT265 | NDTD00DZ33BS |
| D777 | | ZENER DIODE DZ-5.6BSAT265 | NDTA0DZ5R6BS |
| D1001 | | RECTIFIER DIODE 1N4005 | NDQZ001N4005 |
| D1002 | | RECTIFIER DIODE 1N4005 | NDQZ001N4005 |
| D1003 | | RECTIFIER DIODE 1N4005 | NDQZ001N4005 |
| D1004 | | RECTIFIER DIODE 1N4005 | NDQZ001N4005 |
| D1007 | | CARBON RES. 1/4W J 68k Ω | RCX4JATZ0683 |
| D1008 | | SCHOTTKY BARRIER DIODE SB140 | NDQZ000SB140 |
| D1010 | | RECTIFIER DIODE BA158 | NDQZ000BA158 |
| D1011 | | RECTIFIER DIODE BA158 | NDQZ000BA158 |
| D1012 | | SWITCHING DIODE 1N4148M | NDTZ01N4148M |
| D1018 | | SWITCHING DIODE 1N4148M | NDTZ01N4148M |
| D1020 | | SCHOTTKY BARRIER DIODE SB140 | NDQZ000SB140 |
| D1022 | | SWITCHING DIODE 1N4148M | NDTZ01N4148M |
| D1023 | | CARBON RES. 1/4W J 330 Ω | RCX4JATZ0331 |
| D1024 | | SWITCHING DIODE 1N4148M | NDTZ01N4148M |
| D1025 | | SWITCHING DIODE 1N4148M | NDTZ01N4148M |
| D1031 | | PCB JUMPER D0.6-P5.0 | JW5.0T |
| D1036 | | RECTIFIER DIODE 1N4005 | NDQZ001N4005 |
| D1037 | | RECTIFIER DIODE 1N4005 | NDQZ001N4005 |
| D1038 | | RECTIFIER DIODE 1N4005 | NDQZ001N4005 |
| D1058 | | RECTIFIER DIODE 1N4005 | NDQZ001N4005 |

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|---|---|---|---|
| D1301 | | ZENER DIODE DZ-5.6BSBT265 | NDTB0DZ5R6BS |
| D2001 | | LED(GREEN) 204-10GD/S957 | NPQZ10GDS957 |
| D2002 | | LED(GREEN) 204-10GD/S957 | NPQZ10GDS957 |
| **ICS** | | | |
| IC301 | | ACTUATER DRIVER BA5888FP-E2 | QSZBA0TRM075 |
| IC451 | C | IC:HIFI LA72670BM-MPB-E | QSZBA0RSY039 |
| IC501 | | SYSCON IC MN101D08DEK | QSZAA0RMS034 |
| IC751 | | IC:ANALOG MULTIPLEXER CD4053BNSR | NSZBA0TTY093 |
| IC1001 ⚠ | | PHOTOCOUPLER EL817A | NPEA000EL817 |
| IC1002 | | VOLTAGE REGULATOR PQ1LAX95MSPQ | QSZBA0TSH053 |
| IC1004 | | VOLTAGE REGULATOR PQ1LAX95MSPQ | QSZBA0TSH053 |
| IC1201 | | IC:OP AMP KIA4558P | NSZBA0SJY004 |
| IC1402 | | DRIVER FOR DVD MM1637XVBE | QSZBA0TMM102 |
| **COILS** | | | |
| L009 | | CHOKE COIL 47μH-K | LLBD00PKV005 |
| L251 | | PCB JUMPER D0.6-P5.0 | JW5.0T |
| L303 | | INDUCTOR(100μH K) LAP02TA101K | LLAXKATTU101 |
| L304 | | CHOKE COIL 47μH-K | LLBD00PKV005 |
| L325 | | CHIP RES.(1608) 1/10W 0 Ω | RRXAZB5Z0000 |
| L421 | | INDUCTOR 47μH-K-5FT | LLARKBSTU470 |
| L422 | | PCB JUMPER D0.6-P5.0 | JW5.0T |
| L451 | C | PCB JUMPER D0.6-P5.0 | JW5.0T |
| L501 | | PCB JUMPER D0.6-P5.0 | JW5.0T |
| L502 | | CHOKE COIL 47μH-K | LLBD00PKV005 |
| L503 | | INDUCTOR 12μH-K-26T | LLAXKATTU120 |
| L504 | | PCB JUMPER D0.6-P5.0 | JW5.0T |
| L701 | | INDUCTOR 4.7μH-K-26T | LLAXKATTU4R7 |
| L771 | | PCB JUMPER D0.6-P5.0 | JW5.0T |
| L1001 ⚠ | | LINE FILTER 27MH TLF14CB2730R4 | LLBG00ZTU034 |
| L1004 | | BEAD CORE B16 RH 3.5X10X1.3 | XL03010XM001 |
| L1007 | | CHOKE COIL 47μH-K | LLBD00PKV005 |
| L1020 | | CHOKE COIL 47μH-K | LLBD00PKV005 |
| L1350 | | INDUCTOR(100μH K) LAP02TA101K | LLAXKATTU101 |
| L1351 | | INDUCTOR(0.47μH K) LAP02TAR47K | LLAXKATTUR47 |
| L1522 | | INDUCTOR 47μH-K-5FT | LLARKBSTU470 |
| L2001 | | INDUCTOR(100μH K) LAP02TA101K | LLAXKATTU101 |
| **TRANSISTORS** | | | |
| Q031 | | TRANSISTOR KTA1267(Y) | NQSY0KTA1267 |
| Q052 | | RES. BUILT-IN TRANSISTOR KRC103M | NQSZ0KRC103M |
| Q055 | | TRANSISTOR KTC3198(Y) | NQSY0KTC3198 |
| Q056 | | TRANSISTOR KTC3203(Y) | NQSY0KTC3203 |
| Q057 | | TRANSISTOR KTC3199(BL) | NQS50KTC3199 |
| Q301 | | TRANSISTOR KTA1266(GR) | NQS40KTA1266 |
| Q302 | | TRANSISTOR KTC3193(Y) | NQSY0KTC3193 |
| Q303 | | TRANSISTOR KTC3193(Y) | NQSY0KTC3193 |
| Q391 | | TRANSISTOR KTA1266(GR) | NQS40KTA1266 |
| Q421 | | TRANSISTOR KTA1266(GR) | NQS40KTA1266 |
| Q422 | | TRANSISTOR KTC3203(Y) | NQSY0KTC3203 |
| Q425 | | RES. BUILT-IN TRANSISTOR KRA103M | NQSZ0KRA103M |
| Q426 | | CHIP TRANSISTOR RN1511(TE85R) | QQ2Z00RN1511 |
| Q501 | | TRANSISTOR KTC3199(BL) | NQS50KTC3199 |
| Q506 | | PHOTO TRANSISTOR PT204-6B-12 | NPWZT2046B12 |
| Q563 | | TRANSISTOR KTA1267(Y) | NQSY0KTA1267 |
| Q565 | | TRANSISTOR KTA1267(Y) | NQSY0KTA1267 |
| Q566 | | TRANSISTOR KTC3199(Y) | NQSY0KTC3199 |
| Q567 | | TRANSISTOR KTC3199(Y) | NQSY0KTC3199 |
| Q762 | A,B | TRANSISTOR KTC3199(Y) | NQSY0KTC3199 |
| Q763 | A,B | TRANSISTOR KTC3199(Y) | NQSY0KTC3199 |
| Q1001 ⚠ | | FET 2SK3757(Q) | QFWZ02SK3757 |
| Q1003 | | TRANSISTOR 2SC1815-GR(TPE2) | QQS102SC1815 |

| Ref. No. | Mark | Description | Part No. |
|---|---|---|---|
| Q1004 | | TRANSISTOR KTC3203(Y) | NQSY0KTC3203 |
| Q1005 | | TRANSISTOR KTC3199(Y) | NQSY0KTC3199 |
| Q1006 | | TRANSISTOR KTA1267(Y) | NQSY0KTA1267 |
| Q1008 | | TRANSISTOR KTC3199(Y) | NQSY0KTC3199 |
| Q1011 | | TRANSISTOR KTC3203(Y) | NQSY0KTC3203 |
| Q1201 | | TRANSISTOR KTC3199(Y) | NQSY0KTC3199 |
| Q1202 | | TRANSISTOR KTC3199(Y) | NQSY0KTC3199 |
| Q1204 | | TRANSISTOR KTA1266(GR) | NQS40KTA1266 |
| Q1351 | | TRANSISTOR KTC3199(Y) | NQSY0KTC3199 |
| Q1385 | | TRANSISTOR KTC3199(Y) | NQSY0KTC3199 |
| Q2002 | | TRANSISTOR KTC3199(Y) | NQSY0KTC3199 |
| Q2013 | | TRANSISTOR KTC3199(Y) | NQSY0KTC3199 |
| **RESISTORS** | | | |
| R001⚠ | | GLASS GLAZE RES. 1/2W J 3.3M Ω | RXX2JZLZ0335 |
| R031 | | CHIP RES.(1608) 1/10W J 1k Ω | RRXAJB5Z0102 |
| R032 | | CHIP RES.(1608) 1/10W J 4.7k Ω | RRXAJB5Z0472 |
| R034 | | CHIP RES.(1608) 1/10W F 2.40k Ω | RRXAFB5H2401 |
| R037 | | CARBON RES. 1/4W J 1.8k Ω | RCX4JATZ0182 |
| R039 | | CHIP RES.(1608) 1/10W F 5.6k Ω | RRXAFB5H5601 |
| R041 | | CHIP RES.(1608) 1/10W J 33k Ω | RRXAJB5Z0333 |
| R042 | | CHIP RES.(1608) 1/10W J 1.8k Ω | RRXAJB5Z0182 |
| R056 | | CARBON RES. 1/4W J 1k Ω | RCX4JATZ0102 |
| R057 | | CARBON RES. 1/4W J 150 Ω | RCX4JATZ0151 |
| R058 | | CHIP RES.(1608) 1/10W J 180 Ω | RRXAJB5Z0181 |
| R060 | | CARBON RES. 1/4W J 470 Ω | RCX4JATZ0471 |
| R061 | | CARBON RES. 1/6W J 5.6k Ω | RCX6JATZ0562 |
| R062 | | CARBON RES. 1/6W J 27k Ω | RCX6JATZ0273 |
| R063 | | PCB JUMPER D0.6-P5.0 | JW5.0T |
| R073 | | CARBON RES. 1/4W J 10k Ω | RCX4JATZ0103 |
| R075 | | CARBON RES. 1/6W J 4.7k Ω | RCX6JATZ0472 |
| R082 | | CARBON RES. 1/4W J 1.8k Ω | RCX4JATZ0182 |
| R090 | | CARBON RES. 1/4W J 270 Ω | RCX4JATZ0271 |
| R091 | | CARBON RES. 1/4W J 270 Ω | RCX4JATZ0271 |
| R092 | | CARBON RES. 1/4W J 8.2k Ω | RCX4JATZ0822 |
| R093 | | CARBON RES. 1/4W J 1.8k Ω | RCX4JATZ0182 |
| R094 | | CARBON RES. 1/4W J 1.8k Ω | RCX4JATZ0182 |
| R095 | | CARBON RES. 1/4W J 8.2k Ω | RCX4JATZ0822 |
| R301 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R302 | | CHIP RES.(1608) 1/10W J 12k Ω | RRXAJB5Z0123 |
| R304 | | CHIP RES.(1608) 1/10W J 1.2k Ω | RRXAJB5Z0122 |
| R306 | | CHIP RES.(1608) 1/10W J 3.9M Ω | RRXAJB5Z0395 |
| R307 | | CHIP RES.(1608) 1/10W J 100k Ω | RRXAJB5Z0104 |
| R308 | | CHIP RES.(1608) 1/10W J 82k Ω | RRXAJB5Z0823 |
| R309 | | CHIP RES.(1608) 1/10W J 2.2k Ω | RRXAJB5Z0222 |
| R310 | | CHIP RES.(1608) 1/10W J 4.7k Ω | RRXAJB5Z0472 |
| R311 | | CHIP RES.(1608) 1/10W J 1.8k Ω | RRXAJB5Z0182 |
| R312 | | CHIP RES.(1608) 1/10W J 1.8k Ω | RRXAJB5Z0182 |
| R313 | | CHIP RES.(1608) 1/10W J 1.8k Ω | RRXAJB5Z0182 |
| R314 | | CHIP RES.(1608) 1/10W J 680k Ω | RRXAJB5Z0684 |
| R315 | | CHIP RES.(1608) 1/10W 0 Ω | RRXAZB5Z0000 |
| R316 | | CHIP RES.(1608) 1/10W J 2.2k Ω | RRXAJB5Z0222 |
| R317 | | CHIP RES.(1608) 1/10W J 8.2k Ω | RRXAJB5Z0822 |
| R318 | | CHIP RES.(1608) 1/10W 0 Ω | RRXAZB5Z0000 |
| R319 | | CHIP RES.(1608) 1/10W 0 Ω | RRXAZB5Z0000 |
| R320 | | CHIP RES.(1608) 1/10W 0 Ω | RRXAZB5Z0000 |
| R321 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R322 | | CHIP RES.(1608) 1/10W J 18k Ω | RRXAJB5Z0183 |
| R323 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R324 | | CHIP RES.(1608) 1/10W J 18k Ω | RRXAJB5Z0183 |
| R327 | | CHIP RES.(1608) 1/10W F 1.1k Ω | RRXAFB5H1101 |
| R330 | A,B | CHIP RES.(1608) 1/10W J 100k Ω | RRXAJB5Z0104 |
| R391 | | CARBON RES. 1/4W J 560 Ω | RCX4JATZ0561 |

| Ref. No. | Mark | Description | Part No. |
|---|---|---|---|
| R392 | | CARBON RES. 1/4W J 560 Ω | RCX4JATZ0561 |
| R395 | | PCB JUMPER D0.6-P5.0 | JW5.0T |
| R397 | | CHIP RES.(1608) 1/10W J 100 Ω | RRXAJB5Z0101 |
| R401 | A,B | CHIP RES.(1608) 1/10W J 27k Ω | RRXAJB5Z0273 |
| R401 | C | CHIP RES.(1608) 1/10W J 6.8k Ω | RRXAJB5Z0682 |
| R402 | A,B | CHIP RES.(1608) 1/10W J 4.7k Ω | RRXAJB5Z0472 |
| R402 | C | CHIP RES.(1608) 1/10W J 8.2k Ω | RRXAJB5Z0822 |
| R403 | A,B | CHIP RES.(1608) 1/10W J 27k Ω | RRXAJB5Z0273 |
| R404 | A,B | CHIP RES.(1608) 1/10W J 4.7k Ω | RRXAJB5Z0472 |
| R405 | A,B | CHIP RES.(1608) 1/10W J 27k Ω | RRXAJB5Z0273 |
| R406 | A,B | CHIP RES.(1608) 1/10W J 4.7k Ω | RRXAJB5Z0472 |
| R407 | C | CHIP RES.(1608) 1/10W 0 Ω | RRXAZB5Z0000 |
| R408 | C | CHIP RES.(1608) 1/10W 0 Ω | RRXAZB5Z0000 |
| R409 | | CHIP RES.(1608) 1/10W J 8.2k Ω | RRXAJB5Z0822 |
| R410 | | CHIP RES.(1608) 1/10W J 12k Ω | RRXAJB5Z0123 |
| R411 | | CHIP RES.(1608) 1/10W J 330k Ω | RRXAJB5Z0334 |
| R412 | | CHIP RES.(1608) 1/10W J 150 Ω | RRXAJB5Z0151 |
| R413 | | CHIP RES.(1608) 1/10W J 22k Ω | RRXAJB5Z0223 |
| R414 | | CHIP RES.(1608) 1/10W J 910 Ω | RRXAJB5Z0911 |
| R415 | | CHIP RES.(1608) 1/10W J 2.2k Ω | RRXAJB5Z0222 |
| R416 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R421 | | CHIP RES.(1608) 1/10W J 1k Ω | RRXAJB5Z0102 |
| R422 | | CHIP RES.(1608) 1/10W J 22k Ω | RRXAJB5Z0223 |
| R424 | | CARBON RES. 1/6W J 47k Ω | RCX6JATZ0473 |
| R425 | | CARBON RES. 1/6W J 100 Ω | RCX6JATZ0101 |
| R426 | | CARBON RES. 1/6W J 820 Ω | RCX6JATZ0821 |
| R451 | C | CHIP RES.(1608) 1/10W J 12k Ω | RRXAJB5Z0123 |
| R452 | C | CHIP RES.(1608) 1/10W J 4.7k Ω | RRXAJB5Z0472 |
| R453 | C | CHIP RES.(1608) 1/10W J 47k Ω | RRXAJB5Z0473 |
| R454 | C | CHIP RES.(1608) 1/10W J 8.2k Ω | RRXAJB5Z0822 |
| R455 | C | CHIP RES.(1608) 1/10W J 47k Ω | RRXAJB5Z0473 |
| R456 | C | CHIP RES.(1608) 1/10W J 8.2k Ω | RRXAJB5Z0822 |
| R457 | C | CHIP RES.(1608) 1/10W J 470 Ω | RRXAJB5Z0471 |
| R458 | C | CHIP RES.(1608) 1/10W J 3.3k Ω | RRXAJB5Z0332 |
| R459 | C | CHIP RES.(1608) 1/10W J 22k Ω | RRXAJB5Z0223 |
| R462 | C | CHIP RES.(1608) 1/10W J 4.7k Ω | RRXAJB5Z0472 |
| R463 | C | CHIP RES.(1608) 1/10W J 47k Ω | RRXAJB5Z0473 |
| R464 | C | CHIP RES.(1608) 1/10W J 8.2k Ω | RRXAJB5Z0822 |
| R465 | C | CARBON RES. 1/6W J 47k Ω | RCX6JATZ0473 |
| R466 | C | CHIP RES.(1608) 1/10W J 8.2k Ω | RRXAJB5Z0822 |
| R467 | C | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R468 | C | CHIP RES.(1608) 1/10W J 470 Ω | RRXAJB5Z0471 |
| R469 | C | CHIP RES.(1608) 1/10W J 1k Ω | RRXAJB5Z0102 |
| R470 | A,B | CHIP RES.(1608) 1/10W 0 Ω | RRXAZB5Z0000 |
| R470 | C | CHIP RES.(1608) 1/10W J 470 Ω | RRXAJB5Z0471 |
| R471 | C | CHIP RES.(1608) 1/10W J 1k Ω | RRXAJB5Z0102 |
| R472 | C | CHIP RES.(1608) 1/10W 0 Ω | RRXAZB5Z0000 |
| R484 | C | CHIP RES.(1608) 1/10W J 47k Ω | RRXAJB5Z0473 |
| R485 | C | CHIP RES.(1608) 1/10W J 15k Ω | RRXAJB5Z0153 |
| R486 | C | CHIP RES.(1608) 1/10W J 47k Ω | RRXAJB5Z0473 |
| R487 | C | CHIP RES.(1608) 1/10W J 15k Ω | RRXAJB5Z0153 |
| R502 | | CHIP RES.(1608) 1/10W J 2.2k Ω | RRXAJB5Z0222 |
| R503 | | CHIP RES.(1608) 1/10W J 820 Ω | RRXAJB5Z0821 |
| R504 | | CHIP RES.(1608) 1/10W J 100k Ω | RRXAJB5Z0104 |
| R506 | | CHIP RES.(1608) 1/10W J 100k Ω | RRXAJB5Z0104 |
| R508 | | CHIP RES.(1608) 1/10W 0 Ω | RRXAZB5Z0000 |
| R511 | | CHIP RES.(1608) 1/10W J 39k Ω | RRXAJB5Z0393 |
| R517 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R518 | | CHIP RES.(1608) 1/10W J 220k Ω | RRXAJB5Z0224 |
| R523 | | CHIP RES.(1608) 1/10W J 2.2k Ω | RRXAJB5Z0222 |
| R524 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R525 | | CARBON RES. 1/4W J 10k Ω | RCX4JATZ0103 |
| R526 | | CHIP RES.(1608) 1/10W J 1k Ω | RRXAJB5Z0102 |

| Ref. No. | Mark | Description | Part No. |
|---|---|---|---|
| R527 | | CHIP RES.(1608) 1/10W J 1k Ω | RRXAJB5Z0102 |
| R528 | | CARBON RES. 1/4W J 10k Ω | RCX4JATZ0103 |
| R530 | | CARBON RES. 1/4W J 1k Ω | RCX4JATZ0102 |
| R531 | | CARBON RES. 1/6W G 4.7k Ω | RCX6GATZ0472 |
| R532 | | CARBON RES. 1/6W G 1.5k Ω | RCX6GATZ0152 |
| R533 | | CARBON RES. 1/6W G 22k Ω | RCX6GATZ0223 |
| R534 | | CARBON RES. 1/6W G 470 Ω | RCX6GATZ0471 |
| R535 | | CARBON RES. 1/6W G 10k Ω | RCX6GATZ0103 |
| R536 | | CARBON RES. 1/6W G 3.6k Ω | RCX6GATZ0362 |
| R537 | | CHIP RES.(1608) 1/10W J 33k Ω | RRXAJB5Z0333 |
| R540 | | CHIP RES.(1608) 1/10W J 390k Ω | RRXAJB5Z0394 |
| R541 | | CHIP RES.(1608) 1/10W J 390k Ω | RRXAJB5Z0394 |
| R542 | | CARBON RES. 1/4W J 270 Ω | RCX4JATZ0271 |
| R543 | | CHIP RES.(1608) 1/10W J 4.7k Ω | RRXAJB5Z0472 |
| R544 | | CHIP RES.(1608) 1/10W J 18k Ω | RRXAJB5Z0183 |
| R545 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R546 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R551 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R552 | | CHIP RES.(1608) 1/10W J 1k Ω | RRXAJB5Z0102 |
| R557 | | CHIP RES.(1608) 1/10W 0 Ω | RRXAZB5Z0000 |
| R566 | | CARBON RES. 1/6W J 220 Ω | RCX6JATZ0221 |
| R567 | | CHIP RES.(1608) 1/10W J 3.9k Ω | RRXAJB5Z0392 |
| R568 | | CARBON RES. 1/6W J 220 Ω | RCX6JATZ0221 |
| R570 | | CHIP RES.(1608) 1/10W J 3.9k Ω | RRXAJB5Z0392 |
| R573 | | CARBON RES. 1/4W J 180 Ω | RCX4JATZ0181 |
| R574 | | CARBON RES. 1/4W J 180 Ω | RCX4JATZ0181 |
| R575 | | CHIP RES.(1608) 1/10W J 3.9k Ω | RRXAJB5Z0392 |
| R576 | | CARBON RES. 1/4W J 3.9k Ω | RCX4JATZ0392 |
| R580 | | CARBON RES. 1/4W J 560 Ω | RCX4JATZ0561 |
| R585 | | CHIP RES.(1608) 1/10W J 1k Ω | RRXAJB5Z0102 |
| R586 | | CHIP RES.(1608) 1/10W J 1.2k Ω | RRXAJB5Z0122 |
| R587 | | CHIP RES.(1608) 1/10W J 1.5k Ω | RRXAJB5Z0152 |
| R588 | | CHIP RES.(1608) 1/10W J 2.2k Ω | RRXAJB5Z0222 |
| R590 | | CHIP RES.(1608) 1/10W J 1k Ω | RRXAJB5Z0102 |
| R591 | | CHIP RES.(1608) 1/10W J 1.2k Ω | RRXAJB5Z0122 |
| R593 | | CHIP RES.(1608) 1/10W J 1.8k Ω | RRXAJB5Z0182 |
| R594 | | CHIP RES.(1608) 1/10W J 1.8k Ω | RRXAJB5Z0182 |
| R606 | | CARBON RES. 1/4W J 10k Ω | RCX4JATZ0103 |
| R607 | | CARBON RES. 1/4W J 10k Ω | RCX4JATZ0103 |
| R610 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R612 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R615 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R618 | | CARBON RES. 1/4W J 10k Ω | RCX4JATZ0103 |
| R620 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R625 | A,B | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R626 | C | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R640 | C | CHIP RES.(1608) 1/10W J 3.9k Ω | RRXAJB5Z0392 |
| R701 | | CHIP RES.(1608) 1/10W J 330 Ω | RRXAJB5Z0331 |
| R702 | | CARBON RES. 1/4W J 1.8k Ω | RCX4JATZ0182 |
| R703 | A,B | CHIP RES.(1608) 1/10W J 47k Ω | RRXAJB5Z0473 |
| R704 | | CARBON RES. 1/4W J 1k Ω | RCX4JATZ0102 |
| R705 | | CARBON RES. 1/4W J 1k Ω | RCX4JATZ0102 |
| R751 | | CHIP RES.(1608) 1/10W J 75 Ω | RRXAJB5Z0750 |
| R752 | | CHIP RES.(1608) 1/10W J 75 Ω | RRXAJB5Z0750 |
| R753 | | CHIP RES.(1608) 1/10W J 75 Ω | RRXAJB5Z0750 |
| R756 | A,B | CHIP RES.(1608) 1/10W J 47k Ω | RRXAJB5Z0473 |
| R757 | A,B | CHIP RES.(1608) 1/10W J 47k Ω | RRXAJB5Z0473 |
| R773 | C | CHIP RES.(1608) 1/10W J 100k Ω | RRXAJB5Z0104 |
| R774 | | CARBON RES. 1/4W J 3.9k Ω | RCX4JATZ0392 |
| R775 | C | CHIP RES.(1608) 1/10W J 100k Ω | RRXAJB5Z0104 |
| R777 | | CARBON RES. 1/4W J 2.7k Ω | RCX4JATZ0272 |
| R783 | A,B | CHIP RES.(1608) 1/10W J 100k Ω | RRXAJB5Z0104 |
| R784 | A,B | CHIP RES.(1608) 1/10W J 4.7k Ω | RRXAJB5Z0472 |

| Ref. No. | Mark | Description | Part No. |
|---|---|---|---|
| R786 | A,B | CHIP RES.(1608) 1/10W J 100k Ω | RRXAJB5Z0104 |
| R787 | A,B | CHIP RES.(1608) 1/10W J 4.7k Ω | RRXAJB5Z0472 |
| R1004 | | METAL OXIDE FILM RES. 2W J 82k Ω | RN02JZLZ0823 |
| R1005 | | CARBON RES. 1/4W J 1M Ω | RCX4JATZ0105 |
| R1006 | | CARBON RES. 1/4W J 1M Ω | RCX4JATZ0105 |
| R1008 | | CARBON RES. 1/6W G 1k Ω | RCX6GATZ0102 |
| R1010 | | CARBON RES. 1/6W J 22k Ω | RCX6JATZ0223 |
| R1011 | | METAL OXIDE FILM RES. 1W J 0.68 Ω | RN01R68ZU001 |
| R1025 | | CARBON RES. 1/4W J 10k Ω | RCX4JATZ0103 |
| R1026 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R1029 | A,B | CARBON RES. 1/6W J 82k Ω | RCX6JATZ0823 |
| R1029 | C | CARBON RES. 1/6W J 150k Ω | RCX6JATZ0154 |
| R1032 | | CARBON RES. 1/6W J 3.3k Ω | RCX6JATZ0332 |
| R1034 | | CARBON RES. 1/4W J 680k Ω | RCX4JATZ0684 |
| R1036 | | CARBON RES. 1/6W J 100k Ω | RCX6JATZ0104 |
| R1037 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R1038 | | CARBON RES. 1/6W J 100k Ω | RCX6JATZ0104 |
| R1039 | | CARBON RES. 1/6W J 470k Ω | RCX6JATZ0474 |
| R1043 | | METAL OXIDE FILM RES. 1W J 2.7 Ω | RN01JZLZ02R7 |
| R1044 | | CHIP RES.(1608) 1/10W J 220k Ω | RRXAJB5Z0224 |
| R1059 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R1068 | | CARBON RES. 1/4W J 1k Ω | RCX4JATZ0102 |
| R1076 | | CHIP RES.(1608) 1/10W J 22k Ω | RRXAJB5Z0223 |
| R1077 | | CARBON RES. 1/4W J 1k Ω | RCX4JATZ0102 |
| R1085 | | CHIP RES.(1608) 1/10W J 100 Ω | RRXAJB5Z0101 |
| R1086 | | CHIP RES.(1608) 1/10W J 2.2k Ω | RRXAJB5Z0222 |
| R1087 | | CHIP RES.(1608) 1/10W J 1k Ω | RRXAJB5Z0102 |
| R1090 | | CHIP RES.(1608) 1/10W J 5.6k Ω | RRXAJB5Z0562 |
| R1091 | | CHIP RES.(1608) 1/10W J 3.3k Ω | RRXAJB5Z0332 |
| R1092 | | CARBON RES. 1/4W J 82 Ω | RCX4JATZ0820 |
| R1093 | | CARBON RES. 1/4W J 82 Ω | RCX4JATZ0820 |
| R1094 | | CARBON RES. 1/4W J 150 Ω | RCX4JATZ0151 |
| R1095 | | CARBON RES. 1/4W J 150 Ω | RCX4JATZ0151 |
| R1205 | | CARBON RES. 1/6W G 20k Ω | RCX6GATZ0203 |
| R1206 | | CHIP RES.(1608) 1/10W F 20k Ω | RRXAFB5H2002 |
| R1207 | | CHIP RES.(1608) 1/10W J 8.2k Ω | RRXAJB5Z0822 |
| R1208 | | CHIP RES.(1608) 1/10W J 8.2k Ω | RRXAJB5Z0822 |
| R1209 | | CHIP RES.(1608) 1/10W F 30k Ω | RRXAFB5H3002 |
| R1210 | | CHIP RES.(1608) 1/10W F 30k Ω | RRXAFB5H3002 |
| R1221 | | CHIP RES.(1608) 1/10W J 100k Ω | RRXAJB5Z0104 |
| R1222 | | CHIP RES.(1608) 1/10W J 100k Ω | RRXAJB5Z0104 |
| R1223 | | CHIP RES.(1608) 1/10W J 470 Ω | RRXAJB5Z0471 |
| R1224 | | CHIP RES.(1608) 1/10W J 470 Ω | RRXAJB5Z0471 |
| R1225 | | CHIP RES.(1608) 1/10W J 1k Ω | RRXAJB5Z0102 |
| R1226 | | CARBON RES. 1/4W J 1k Ω | RCX4JATZ0102 |
| R1238 | | CHIP RES.(1608) 1/10W 0 Ω | RRXAZB5Z0000 |
| R1240 | | CHIP RES.(1608) 1/10W J 100k Ω | RRXAJB5Z0104 |
| R1245 | | CARBON RES. 1/6W J 10 Ω | RCX6JATZ0100 |
| R1351 | | CHIP RES.(1608) 1/10W J 2k Ω | RRXAJB5Z0202 |
| R1352 | | CHIP RES.(1608) 1/10W J 2.2k Ω | RRXAJB5Z0222 |
| R1353 | | CHIP RES.(1608) 1/10W J 2.2k Ω | RRXAJB5Z0222 |
| R1354 | | CHIP RES.(1608) 1/10W J 220 Ω | RRXAJB5Z0221 |
| R1355 | | CHIP RES.(1608) 1/10W J 75 Ω | RRXAJB5Z0750 |
| R1356 | | CHIP RES.(1608) 1/10W J 100k Ω | RRXAJB5Z0104 |
| R1392 | | CARBON RES. 1/4W J 1k Ω | RCX4JATZ0102 |
| R1396 | | CHIP RES.(1608) 1/10W J 470 Ω | RRXAJB5Z0471 |
| R1397 | | PCB JUMPER D0.6-P5.0 | JW5.0T |
| R1398 | | CHIP RES.(1608) 1/10W J 470 Ω | RRXAJB5Z0471 |
| R1421 | | CHIP RES. 1/10W F 160 Ω | RRXAFB5H1600 |
| R1422 | | CHIP RES.(1608) 1/10W J 75 Ω | RRXAJB5Z0750 |
| R1441 | | CHIP RES. 1/10W F 160 Ω | RRXAFB5H1600 |
| R1442 | | CHIP RES.(1608) 1/10W J 75 Ω | RRXAJB5Z0750 |
| R1443 | | CHIP RES.(1608) 1/10W J 75 Ω | RRXAJB5Z0750 |

| Ref. No. | Mark | Description | Part No. |
|---|---|---|---|
| R1461 | | CHIP RES.(1608) 1/10W F 75 Ω | RRXAFB5H75R0 |
| R1462 | | CHIP RES.(1608) 1/10W J 75 Ω | RRXAJB5Z0750 |
| R1481 | | CHIP RES.(1608) 1/10W F 75 Ω | RRXAFB5H75R0 |
| R1482 | | CHIP RES.(1608) 1/10W J 75 Ω | RRXAJB5Z0750 |
| R1490 | | CHIP RES.(1608) 1/10W 0 Ω | RRXAZB5Z0000 |
| R1521 | B | CHIP RES.(1608) 1/10W J 2.2k Ω | RRXAJB5Z0222 |
| R2001 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R2002 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R2003 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R2005 | | CHIP RES.(1608) 1/10W J 6.8k Ω | RRXAJB5Z0682 |
| R2006 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R2028 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R2031 | | CHIP RES.(1608) 1/10W J 22k Ω | RRXAJB5Z0223 |
| R2051 | | CARBON RES. 1/4W J 3.9k Ω | RCX4JATZ0392 |
| R2052 | | CARBON RES. 1/4W J 3.9k Ω | RCX4JATZ0392 |
| R2053 | | CARBON RES. 1/4W J 180 Ω | RCX4JATZ0181 |
| R2054 | | CARBON RES. 1/4W J 180 Ω | RCX4JATZ0181 |
| R2055 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R2056 | | CHIP RES.(1608) 1/10W J 10k Ω | RRXAJB5Z0103 |
| R2086 | | CHIP RES.(1608) 1/10W J 5.6k Ω | RRXAJB5Z0562 |
| **SWITCHES** | | | |
| SW501 | | TACT SWITCH KSM0614B | SST0101HH013 |
| SW502 | | TACT SWITCH KSM0614B | SST0101HH013 |
| SW505 | | TACT SWITCH KSM0614B | SST0101HH013 |
| SW508 | | TACT SWITCH KSM0614B | SST0101HH013 |
| SW509 | | TACT SWITCH KSM0614B | SST0101HH013 |
| SW511 | | LEAF SWITCH MXS01830MVP0 | SSC0101MCE03 |
| SW512 | | ROTARY MODE SWITCH SSS-53MD | SSR0106KB003 |
| SW513 | | TACT SWITCH KSM0614B | SST0101HH013 |
| SW514 | | TACT SWITCH KSM0614B | SST0101HH013 |
| SW515 | | TACT SWITCH KSM0614B | SST0101HH013 |
| SW516 | | TACT SWITCH KSM0614B | SST0101HH013 |
| SW2002 | | TACT SWITCH KSM0614B | SST0101HH013 |
| SW2003 | | TACT SWITCH KSM0614B | SST0101HH013 |
| SW2005 | | TACT SWITCH KSM0614B | SST0101HH013 |
| SW2006 | | TACT SWITCH KSM0614B | SST0101HH013 |
| **MISCELLANEOUS** | | | |
| 2B11 | | HEAD SHIELD H9600UD | 0VM306770 |
| 2B15 | | BUSH, LED(F) H3700UD | 0VM409508 |
| 2L062 | | SCREW, B-TIGHT M3X8 BIND HEAD + | GBKB3080 |
| 2L082 | | SCREW, S-TIGHT M3X5 BIND HEAD + | GBKS3050 |
| A4 | | JACK BOARD(TUNER) H9600UD | 0VM306675 |
| A5 | A | JACK COVER(RCA) H9601UD | 0VM204469 |
| A5 | B | JACK BOARD(RCA) H9610UD | 0VM306766 |
| A5 | C | JACK BOARD(RCA) H9600UD | 0VM204468 |
| AC1001 ⚠ | A,B | AC CORD PB8B2F9110A-05A | WAC0172LW013 |
| AC1001 ⚠ | C | AC CORD PB8B2F9110A-05A | WAC0172LW013 |
| F1001 ⚠ | A,B | FUSE SIC 1A 250V U/C T | PAGG20CW3102 |
| F1001 ⚠ | C | FUSE SIC 1A 250V U/C T | PAGG20CW3102 |
| FH1001 | | FUSE HOLDER MSF-015 | XH01Z00LY001 |
| FH1002 | | FUSE HOLDER MSF-015 | XH01Z00LY001 |
| JC01 | | CHIP CERAMIC CAP. CH J 100pF/50V | CHD1JJBCH101 |
| JC05 | | CHIP RES.(1608) 1/10W 0 Ω | RRXAZB5Z0000 |
| JC06 | | CHIP RES.(1608) 1/10W 0 Ω | RRXAZB5Z0000 |
| JC08 | | CHIP RES.(1608) 1/10W J 100 Ω | RRXAJB5Z0101 |
| JK1202 | | RCA JACK(BLACK) MSP-281V2-B | JXRL010LY062 |
| JK1401 | | S TYPE JACK MDC-050V-2.4 | JXEL040LY001 |
| JK1403 | | RCA JACK MSP-283V-B-752 NI LF | JXRL040LY099 |
| JK751 | | RCA JACK MSP-283V-B-324 | JXRL040LY006 |
| JK752 | A,B | RCA JACK MSP-282V-14 | JXRL030LY001 |
| JK752 | C | RCA JACK MSP-293V3-324 | JYRL060LY003 |
| JK753 | | RCA JACK(YELLOW) MSP-281V4-B | JXRL010LY003 |
| JK754 | C | RCA JACK(WHITE) MSP-281V1-B | JXRL010LY005 |
| JK755 | A,B | RCA JACK(WHITE) MSP-281V1-B | JXRL010LY005 |
| JK755 | C | RCA JACK(RED) MSP-281V3-A | JYRL010LY002 |
| JK756 | | RCA JACK MSP-282V-12 PBSN | JXRL030LY011 |
| RM2001 | | REMOTE RECEIVER PIC-37042LU | USESJRSKK033 |
| T001 ⚠ | | SWITCHING TRANSFOMER CGS-SW0085A | LTT00CPSA178 |
| TP301 | | PCB JUMPER D0.6-P15.0 | JW15.0T |
| TP302 | | PCB JUMPER D0.6-P15.0 | JW15.0T |
| TP502 | | PCB JUMPER D0.6-P5.0 | JW5.0T |
| TP505 | | PCB JUMPER D0.6-P5.0 | JW5.0T |
| TP506 | | PCB JUMPER D0.6-P8.0 | JW8.0T |
| TP507 | | PCB JUMPER D0.6-P7.0 | JW7.0T |
| TP513 | | PCB JUMPER D0.6-P7.5 | JW7.5T |
| TP751 | | PCB JUMPER D0.6-P23.5 | JW23.5T |
| TP753 | | PCB JUMPER D0.6-P25.5 | JW25.5T |
| TP754 | | PCB JUMPER D0.6-P22.5 | JW22.5T |
| TU701 | | TUNER UNIT VH025AFE | UTUNNTUSP026 |
| VR501 | | CARBON P.O.T. VZ067TL1 B104 PB(F) | VRCB104HH014 |
| W002 | | FFC CABLE, 26P FFC/P1.00/230 | WX1H9600-002 |
| W004 | A,C | FFC CABLE, 17P FFC/P1.00/195 | WX1H9600-005 |
| W006 | B | FFC CABLE, 15P FFC/P1.00/195 | WX1H9800-100 |
| X301 | | X'TAL 3.579545MHz(20PPM) | FXC355LLN003 |
| X502 | | X'TAL 32.768kHz(20PPM) | FXC323LCHE01 |

## DVD OPEN/CLOSE CBA

| Ref. No. | Description | Part No. |
|---|---|---|
| | DVD OPEN/CLOSE CBA (MCV-C)<br>Consists of the following: | --------- |
| **SWITCH** | | |
| SW2001 | TACT SWITCH KSM0614B | SST0101HH013 |
| **MISCELLANEOUS** | | |
| W011 | PARALLEL WIRE, 2P AWG26#2651/P2.0/125 | WX1H9600-011 |

## SENSOR CBA

| Ref. No. | Description | Part No. |
|---|---|---|
| | SENSOR CBA<br>Consists of the following: | 1VSA10910 |
| **TRANSISTORS** | | |
| Q503 | PHOTO TRANSISTOR PT204-6B-12 | NPWZT2046B12 |
| Q504 | PHOTO TRANSISTOR PT204-6B-12 | NPWZT2046B12 |